



GATWICK MASTER PLAN JULY 2012
Gatwick

YOUR LONDON AIRPORT

Gatwick

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Foreword

Stewart Wingate
Chief Executive Officer



Today, more than 80 years since the first aircraft took off from Gatwick, we are one of the busiest international airports in the world, with around 60 airlines flying around 34 million passengers to more than 200 destinations every year.

Gatwick is the UK's second busiest airport, the busiest point-to-point airport in Europe and an economic engine for London and the South East of England. Every year, Gatwick contributes around £2 billion to the regional economy. We enable tourism to flourish, businesses to prosper and 21,000 people to say they are proud to work at Gatwick. Increasingly, we are showing that we can provide the new routes to key and emerging economies that the UK needs in order to prosper.

I, and my team, know that the extensive social and economic benefits that Gatwick creates must be balanced with a sustainable operation. We have a responsibility to manage our impact on the environment and our local communities and, where possible, reduce it. We need the support of our airlines, business partners, regulators and stakeholders to do this. I am really pleased with the partnerships we have forged since Gatwick became an independent airport.

We are also at a key point in the Government's developing aviation policy. The Future of Airport Transport White paper (2003) remains the most comprehensive statement of public policy regarding the UK's major airports. However the Government has confirmed that it will publish a new Sustainable Aviation Policy Framework (SAP) in Spring 2013.

Since the publication of our Interim Master Plan in 2006, the ownership of the airport has changed and a new management team is in place. A Global Infrastructure Partners led consortium completed its purchase of Gatwick in December 2009, establishing us as a stand-alone, independent airport and marking the beginning of an exciting new chapter in our history.

As a result of new ownership, and other changes that have taken place since 2006, we published a new draft master plan in October 2011. To outline our proposals, we held the largest public consultation exercise in Gatwick's history, which included public exhibitions, workshops, presentations and a dedicated web-site. Hundreds of people and organisations

took the time to give us detailed feedback. Over a thousand more spoke to us face-to-face about our plans. Having reviewed and acted on all the views we received, I am now delighted to present this finalised master plan for Gatwick.

Our ambition is to compete to grow and become London's airport of choice, by delivering great service to passengers and investing in new facilities. We believe this will enable Gatwick to grow to serve around 40 million passengers each year by 2020 or soon after. We have no current plans for a second runway at Gatwick and are focused on making the best use of our existing infrastructure. This master plan shows how significant growth can be accommodated at Gatwick over the next decade.

We continue to deliver on our commitments and obligations around sustainable growth, captured in our innovative legal agreement with Crawley Borough Council and West Sussex County Council. We have now gone further to develop our 'Decade of Change' sustainability strategy which sets out a challenging set of goals and targets.

On-going engagement with our business partners and stakeholders is central to the way we run Gatwick. Our decisions on the operation, development and future direction of the airport are informed by detailed, open and transparent consultation. We want to develop a distinctive voice for Gatwick, ensuring that the best interests of all those involved with the airport are represented, by welcoming continuous dialogue and feedback.

In the last two years, we have shown that competition breeds success. We are delivering on our commitment to provide great service every day. Airlines and passengers are choosing Gatwick not because they have to, but because they want to. The commitment and enthusiasm of our staff is growing every day. Our engagement with our local communities is based not just on compliance, but trust. These are great achievements. But we have more to. This plan is about taking us there.



Executive Summary

Competing to grow and become London's airport of choice

GATWICK TODAY

S1

Gatwick is the second largest airport in the UK and the busiest point-to-point airport in Europe handling 33.8 million passengers in 2011/12. We believe we can grow the airport to a throughput of 40 million passengers per annum (mppa) by 2021/22 and that, in doing so, we can compete to grow and become London's airport of choice.

S2

To help us achieve this ambition, our strategic priorities are to:

- Deliver the best passenger experience
- Help our airlines grow
- Increase value and efficiency
- Protect and enhance our reputation
- Build a strong environment, health and safety culture
- Develop the best people, processes and technology

S3

We have delivered large parts of our current £1.2 billion investment programme, which has helped to transform the airport for airlines and passengers. We have seen the expansion of the North Terminal, with a new entrance building, check-in and reclaim facilities, a new inter-terminal shuttle, a new security search area in the South Terminal and forecourt improvements, a new immigration hall and upgraded gate rooms. We believe these, and other changes, will help us deliver great service for passengers.

We are already looking to the future, publishing proposals to invest a further £1 billion in the airport from 2014 onwards. We are currently engaging with our airlines and passengers on the final form this programme will take.

LEGISLATIVE, REGULATORY AND PUBLIC POLICY ENVIRONMENT

S4

Gatwick works within a regulated environment. Our activities are subject to specific legislative requirements at European and national level. We are also subject to economic regulation of the charges we levy on airlines and passengers. At a local level, we develop the airport in accordance with legally binding planning agreements with local authorities.

S5

Our development takes place against the background of an on-going debate around what a future airports policy could look like. The Government has confirmed that it will publish a new Sustainable Aviation Policy Framework (SAP) in Spring 2013. We will work with Government to realise their vision for the future of the UK's airport infrastructure.

PURPOSE OF OUR MASTER PLAN

S6

In line with Government guidance, the primary purpose of this plan is to look forward to 2020 and explain the implications of making the best use of our single runway. Its second purpose is to look onwards to 2030. Gatwick could, in 2030, handle around 45 million passengers on one runway and perhaps more if there were to be a second runway. This plan supersedes our 2006 Interim Master Plan.

S7

This final master plan has been informed by a three month public consultation on a draft document published on 13th October 2011. Around 250 written responses were received on the draft. This consultation exercise, the largest we have ever conducted, has led us to modify and clarify our master plan in a number of ways.

S8

Our plan does not have statutory status, but it both informs and is informed by, a variety of statutory planning documents that are produced by local authorities, as well as existing Government policy and the regulatory environment in which Gatwick operates.

MAKING BEST USE OF OUR INFRASTRUCTURE

S9

Gatwick is the busiest single runway airport in the world. We believe that small increases in peak hour movements may be possible, and that there are opportunities to grow traffic in the existing off-peak periods when existing runway capacity is not being fully utilised. Combined with an expected gradual growth in average aircraft size, we believe Gatwick can realise significant growth through more efficient use of its existing infrastructure.

S10

By making use of the full potential of the single runway we believe we will grow to 40mppa with 279,000 aircraft movements by around 2021/22.

BASE CASE FORECASTS – SUMMARY

	2011/12 <i>(actual)</i>	2021/22 <i>(forecast)</i>
Aircraft movements	248,700	279,000
Passengers <i>(millions)</i>	33.8	40.2
Cargo tonnage	88,100	130,400

Looking further ahead, we think Gatwick, with a single runway, has the potential to grow up to around 45mppa by 2030.

S11

In moving towards this level of growth, we will make every effort to maintain, and, where possible, improve the sustainability of our operations. We will seek to ensure that the airport remains affordable to airlines and their passengers, that service levels remain high, operations are resilient to the effects of disruption and that adequate airspace and surface access infrastructure is in place to support the growth we envisage.

DELIVERING SUSTAINABLE GROWTH

S12

In 2010 we published our 'Decade of Change' plan outlining how, over the next ten years, we will improve the overall sustainability of Gatwick's operations by:

- Reducing our direct carbon emissions by 50% compared to 1990 levels
- Cutting our energy consumption by 20% compared to 1990 levels
- Improving the way we mitigate airport related noise through implementing our 'Noise Action Plan'¹
- Eliminating the use of all landfill waste sites and ensuring that 70% of all the waste we generate is recycled
- Investing in new infrastructure that will improve the quality of water leaving the airport site
- Managing the impact of our operations on local air quality
- Enhancing the £2billion contribution we make to the UK economy through the 21,000 jobs we generate on-site
- Promoting more sustainable surface access to the airport

We are already implementing action plans to deliver these objectives. We believe that, as more passengers choose Gatwick, our environmental impact will be manageable and acceptable.

GATWICK IN 2020

S13

Over the next 10 years we expect our annual throughput to grow to around 40 million passengers. In accommodating this growth, we do not expect any significant change to the airport's size or the way we use the land. However we do anticipate important changes to our airport infrastructure.

S14

The exact scope of these changes will be shaped by discussions with airlines and business partners. They might include:

- optimisation of the runway and taxiway system;
- work to enable Airbus A380 operations;
- completion of current terminal projects, plus:
 - expansion of North Terminal (NT) security search
 - reconfiguration of NT departure lounge
 - baggage system improvements
 - reconfiguration of check-in facilities in both terminals
- pier redevelopment and additional NT pier-served stands;
- apron reconfiguration;
- and surface access improvements:
 - additional car parking
 - road junction improvements.

S15

We project that, operating at 40mppa, Gatwick will create an extra 1,200 on-airport jobs and enable the airport to contribute approximately £2.1 billion Gross Value Added (GVA) to the economies of London and the South East alone. The benefits to the wider UK economy are likely to be even more significant.

S16

Our transport assessment shows that the road network around Gatwick, with minor junction improvements, will be able to accommodate the traffic our anticipated growth will generate. Improvements to local rail infrastructure, and the station itself, will add capacity and improve the passenger experience for rail travellers. In particular, a £53 million upgrade of the airport railway station will have been completed. Our transport plans will be enhanced by a new Airport Surface Access Strategy that is due to be launched later in 2012.

S17

We have also studied how this growth will impact on the local environment, specifically our overall carbon footprint, local air quality, aircraft and ground noise, waste, energy, water, and landscape and biodiversity. While we forecast improvements in air quality and reductions in those carbon emissions for which we are directly responsible, there are some modelled impacts that show an increase from today's levels. These are air and ground noise and 'Scope 3' carbon emissions. These increases are all associated with the forecast increase in aircraft movements. Chapter 9 sets these results in to context and explains our action plans to address them.

GATWICK IN THE LONGER TERM WITH A SINGLE RUNWAY

S18

By 2030 Gatwick could be handling up to 45mppa but, with a single runway, this means we will be operating at full capacity.

S19

A large proportion of this growth would be accommodated by making use of currently unused capacity outside the peak periods. We expect that the amount of new infrastructure needed to support it will be relatively small. However, some redevelopment will be necessary, for example, in order to comply with any new statutory requirements for security and border control, deliver an enhanced passenger service or improve energy efficiency at the airport. All airport developments other than surface access improvements should be contained within the existing airport boundary.

S20

We think that further improvements to some of the key road junctions around the airport may be needed – but these are being driven by the forecast growth in local road journeys as well as airport traffic.

GATWICK IN THE LONGER TERM WITH A SECOND RUNWAY

S21

We have no current plans for a second runway at Gatwick. The scenarios outlined above are based on Gatwick remaining largely the same size – with a single runway, two terminals and within its existing boundary.

S22

At the same time, like any business, our plans need to cater for all eventualities. We do need to anticipate that, in the long term, a second runway at Gatwick may be needed.

S23

This means that we will continue to work in partnership with our local authorities to safeguard land for future expansion because we believe it to be sensible business practice and it supports current Government policy.



Introduction

1.1

In October 2011 Gatwick Airport published a new draft master plan, five years after the publication of the previous document² which was produced when the airport was under the ownership of BAA. Following a three month public consultation exercise, which is described in Chapter 11, this final master plan has been prepared, to explain our plans for Gatwick in the years up to 2020 and beyond.

1.2

We have taken the decision to publish a new master plan for Gatwick because, not only is it good practice to update these on a five year cycle, but there have been several significant changes to the overall environment that Gatwick operates in, including:

- The formation of a new coalition Government, which is currently reviewing its aviation policy.
- A change in ownership of Gatwick and introduction of real competition into the London airport market.
- A change in the overall characteristics of the global aviation market, which resulted in a decline in traffic to and from the airport between 2007 and 2010.
- The initiation of the 'Open Skies' Air Services Agreement between the United States and the UK.
- Rapid growth in short-haul low-cost services.



THE PURPOSE OF OUR MASTER PLAN

1.3

This master plan is intended to describe the strategic direction for Gatwick over the next few years. It does not describe the development projects that will be needed to deliver this strategy in detail because we first need to discuss these with the airlines as part of the regulatory structure that we currently work within. As part of our engagement with the airlines we will be exploring the business case, scope and options on how we address specific development needs. While we cannot provide specific information on future projects in this master plan we do provide general guidance on the kind of developments that we anticipate will be needed.

1.4

The master plan also explains the prospects for traffic growth and how this growth will affect the way the airport interacts with the surrounding communities; for example through the generation of employment opportunities and the environmental impacts of the airport operation.

1.5

The main focus of the master plan is on the years to 2020 when we expect to be handling around 40 million passengers annually. Compared to current traffic levels this represents a growth of around 19% (or 14% higher than 2007 traffic volumes - our busiest year so far). The master plan also provides a description of how Gatwick might be in 2030.

THE STRUCTURE OF OUR MASTER PLAN

1.6

The content is guided by the DfT's recommendations³ for airport master plans and the structure follows a broadly similar format to the 2006 document.

- *Chapter 2* provides details of what new ownership of Gatwick means and describes our strategic priorities for its development.
- *Chapter 3* describes the legislative, regulatory and public policy environment in which we operate.
- *Chapter 4* describes Gatwick's existing air traffic and provides details of our latest traffic forecasts.
- *Chapter 5* describes the physical characteristics of the existing airport and our current construction projects to deliver improvements.
- *Chapter 6* describes how we believe Gatwick might look in 2020 operating with a throughput of around 40mppa.
- *Chapter 7* describes our existing road and rail infrastructure, our strategies for promoting efficient and sustainable surface access to and from the airport, and the changes needed to accommodate 40mppa.
- *Chapter 8* describes how the airport supports the region through the provision of employment and contributions to the local economy.
- *Chapter 9* describes how we are managing the environmental impacts of Gatwick's operation and how we expect these to change with a throughput of 40mppa.
- *Chapter 10* describes how we believe Gatwick might look in 2030 operating as a single runway airport. We also describe how the airport might develop if a second runway were constructed in this timeframe.
- *Chapter 11* explains how this final master plan has been shaped by the public consultation on the 2011 draft document.

HOW THIS FINAL MASTER PLAN HAS CHANGED FROM THE CONSULTATION DRAFT

17

We received around 250 written comments following the public consultation, in addition to over a thousand conversations about the draft master plan at the exhibitions and workshops. As a result of these we have made many changes to the master plan and Chapter 11 explains what has changed and why.

18

To summarise, the topics that attracted the most comments during consultation were:

- the safeguarding for a second runway;
- access to and from the airport;
- the economic benefits of the airport to the region;
- and the management of environmental impacts and in particular air noise.

19

Many comments were made both supporting, and objecting to, the development of a second runway. Gatwick's position remains the same as it has been since the change of ownership. We have no current plans to develop a second runway but we will continue, in partnership with local authorities, to safeguard land for one should it be needed in the future. There have been no material changes to the master plan on this topic.

1.10

Comments on surface access included the need to expand the public transport services at Gatwick, and promote their level of use, the adequacy of the road system serving the airport and the planned provision of more car parking. As a result we have made significant changes to Chapter 7 to provide more information on our strategies to manage the provision of surface access infrastructure and services.

1.11

Comments on economic benefit centred on our forecasts of employment growth and the economic contribution of Gatwick to the region. As a result we have commissioned a new survey of employment at the airport and economic benefits have been updated. These are described in a substantially re-written Chapter 8.

1.12

Comments relating to environmental impacts centred on the expected increase in flights and the impact on noise, air quality and carbon emissions. The visual screening of the airport also received several comments along with other comments on environmental topics generally. As a result we have made significant changes to Chapter 9 to provide more information on the environmental impact of our master plan and our management and mitigation strategies.

1.13

As well as editing the master plan to reflect comments made through the consultation process, we have taken the opportunity to update the document to take account of other changes that have taken place since the draft was written. These include:

- new air traffic forecasts;
- our latest research into the needs of passengers and how this has shaped our service proposition;
- the latest developments in government policy on planning and airport regulation;
- and the latest thinking on future infrastructure developments at the airport.



2

Our ambition

ABOUT GATWICK

2.1

Gatwick is the second busiest airport in the UK and the busiest point-to-point airport in Europe, handling 33.8 million passengers in 2011/12. It is also the busiest single-runway international airport in the world, scheduling up to 53 aircraft movements per hour in peak times.

2.2

Gatwick has around 60 airlines flying to more than 200 destinations – more than any other UK airport. Approximately 21,000 people are employed on the airport campus, while Gatwick generates around £2 billion for the economy of London and the South East each year.

PREMIUM
Gatwick

by invitation only

NEW OWNERSHIP

2.3

BAA put Gatwick up for sale in October 2008 following the Competition Commission's inquiry into the competitive dynamics of the South East England airports' market.

2.4

On 4 December 2009, a Global Infrastructure Partners (GIP) led consortium completed its £1.51 billion acquisition of Gatwick, creating an independent airport and opening up real competition in the London airports' market for the first time since privatisation.

2.5

Today Gatwick is owned by a group of global investment funds – of which GIP has the largest stake – committed to a long term investment focusing on improving facilities and service levels. At the time of publication, the ownership structure stood at:

• Global Infrastructure Partners	42%
• The Abu Dhabi Investment Authority	15.9%
• The California Public Employees' Retirement System	12.8%
• Korean National Pension Service	12.1%
• Future Fund of Australia	17.2%

It is possible that Gatwick's ownership structure could change towards the end of the life of this master plan. However we have no reason to believe that any change in the ownership structure would materially alter the strategies outlined.

2.6

The shareholder board, under the chairmanship of Sir David Rowlands, is committed to making Gatwick a successful, international airport; a goal shared by the executive management team led by Stewart Wingate, Chief Executive Officer.

OUR AMBITION AND STRATEGY

2.7

Since the change in ownership Gatwick has been competing vigorously with the other London airports for passengers travelling to and from the capital and the South East region. To a lesser extent we also compete with some European airports for transfer passengers although these are a small proportion of Gatwick's business.

2.8

Our ambition is to compete to grow and become London's airport of choice. To do this, we need to provide the right facilities and service levels to improve our competitiveness. We also need to ensure that Gatwick's operation and growth plans are sustainable, maximising the benefits that the airport brings to the local area but also managing our environmental impacts.

2.9

We have set out six strategic priorities to help us achieve our ambition.

These are to:

1. *Deliver the best passenger experience* by listening to our passengers and delivering the kind of service that will make them choose to fly from Gatwick
2. *Help our airlines grow* by understanding their goals and developing commercial partnerships
3. *Increase value and efficiency* by maximising income from retail, property and car parks, lowering our operating costs and investing efficiently
4. *Protect and enhance our reputation* by building strong and constructive relationships with our stakeholders, based on openness and trust
5. *Build a strong environment, health and safety culture* by maintaining a relentless focus on achieving zero incidents
6. *Develop the best people, processes and technology* by investing in high performing people, driving continuous improvement and the right systems

2.10

To demonstrate our commitment to best practice, Gatwick was the largest UK airport last year to have ISO14001 (environmental management), OHSAS18001 (occupational health and safety management), Carbon Trust standard (and ACI accreditation for our carbon management performance) and PAS55 (asset management) accreditation. We are working towards similar accreditation in Investors in People and CIPS (procurement and supply).

DELIVERING GREAT SERVICE

2.11

We are the first major airport in the UK to work with our airlines and partners to agree clear Passenger Commitments -these outline a common approach to delivering great service which goes to the heart of what passengers want. These are:

- We'll treat you as our guest
- We hate queues
- We love to be on time.

2.12

These commitments have so far been endorsed by 21 of Gatwick's airlines and business partners. They are supported by a range of specific initiatives that will allow passengers to see exactly what we are doing to make their journeys easier and more enjoyable. Our commitment to passenger service mirrors the current Government's 'better, not bigger' approach to airports policy which was the focus of the South East Airports Taskforce. The Civil Aviation Authority (CAA) has also taken a similar approach through its focus on passenger interests in its draft five-year strategic plan.

2.13

Our current £1.2 billion investment programme is focused on helping us achieve great service. The improvements we are making will significantly enhance the passenger journey to, through and from our airport. Departing passengers will have easier check-in and security processes, enjoy an enhanced retail offering and on-time departures; while arriving passengers will benefit from faster journeys from gates, less time at immigration, shorter waits at baggage reclaim and more accessible information to help them make informed choices about onward travel and leisure options.

2.14

However we recognise that to compete successfully we need to understand the expectations and requirements of our passengers and airlines and respond to these with the right services and infrastructure. With this in mind we have completed:

- new passenger research, via focus groups and an on-line survey;
- meetings with airlines to discuss their requirements;
- workshops and site visits with our Passenger Advisory Group;
- and visits and benchmarking of other airports.

2.15

Through this continuing process we are developing new and innovative products and services that we are confident will support our strategies for growth. These are being developed as standard offers to our regular passengers and also specific service offers targeted at traveller types that have special requirements, for example family groups and business and premium passengers.

2.16

We are also focussing on the needs of passengers with reduced mobility (PRM). This is one of our fastest growing passenger groups with 12% growth in the last 12 months. Several changes have been made to the services we offer PRMs for example:

- we have changed the contractual relationship with our service provider to increase the level of joint working with GAL;
- we have made improvements throughout the whole PRM passenger journey through the airport, e.g. PRM forecourt areas and assistance lanes through security;
- and we are working jointly with the airlines to increase pre-notification of PRM passengers and understand and improve the process.

This has already brought about a marked increase in the number of compliments received from PRMs which grew from 57 in 2009 to 164 in 2011 (and these were accompanied by an even greater reduction in the number of complaints). We are continually seeking improvements in PRM service and work closely with our Passenger Advisory Group (PAG) to test that our new infrastructure and services meets the needs of PRM passengers.

2.17

We believe these new service initiatives, informed by in-depth passenger research, will demonstrate our commitment to offering a welcoming experience at Gatwick for all users.

GROWING OUR NETWORK

2.18

In terms of volume, Gatwick is dominated by point-to-point, short-haul, leisure passengers and we expect this to remain the case in the future. Our plans to develop and improve the airport embrace these markets and the existing airlines that serve them and we anticipate growth in the numbers of passengers flying for leisure purposes to short-haul destinations.

2.19

However we also recognise the opportunity to grow our long-haul and business sectors. This requires us to provide the right products to support the growth of these markets and also to market Gatwick to global customers who may be unfamiliar with our role as a London gateway. There has been a particular focus on this activity since the change in ownership and we have had many successes. For example several airlines new to Gatwick have started services to the Far East in recent months and we have seen growth in business routes within Europe as well. We have seen the proportion of business passengers grow from 14.3% in 2010 to 16.3% in 2011 reinforcing the opportunity to grow this market as we compete with the other airports serving London and the south east.

'DECADE OF CHANGE'

2.20

We are committed to operating, developing and growing Gatwick Airport sustainably which means minimising our impact on the environment and maximising the socio-economic benefits for the local community, region and the nation.

2.21

In 2010 we published 'Decade of Change' outlining our sustainability priorities and our 10-point plan outlining our targets and approach to community relationships, economic benefits, surface access and environmental management.

2.22

We cannot do this alone and we work closely with airlines, business partners and stakeholders to make sure our goals are shared and supported. We are building on strong foundations and standards, but recognise there are opportunities for improvement in the future. Later in this master plan we say more about our environmental action plans and how we are measuring our performance against the agreed targets.

COMMUNITY ENGAGEMENT AND GATCOM

2.23

While Gatwick makes a major contribution to the local economy we recognise that our operations have an impact on the local community. We are committed to developing Gatwick in a sustainable way and welcome dialogue with our neighbours on how these impacts should be managed. We believe the public consultation on the draft master plan was a good example of this working in practice. However, under the Airports Act (1986) we are required to have an independent consultative committee, to act as the primary forum for stakeholders to engage with Gatwick on those airport-related issues affecting them. This role is filled by the Gatwick Airport Consultative Committee (GATCOM). While we continue to engage bilaterally with groups and individuals that approach the airport with issues of concern, any initiatives that we develop in response to those concerns must, ultimately, be referred to GATCOM prior to implementation.

2.24

We participate in quarterly meetings of GATCOM, which include representatives of the local parish, borough, district and county councils, as well other stakeholder representatives, to examine the performance and activity of the airport.

2.25

In order to pursue responsible growth we have agreements with our local authorities to support our neighbouring communities. Central to this is the Gatwick Airport Community Trust which has awarded more than £1 million in grants since it was set up in 2002. Our contributions increase by £6,000 each year and in 2012, we will be contributing £182,000 to the trust to ensure that many worthwhile community, charitable and educational projects are given some help to continue doing the good work they are doing for, and with, local people.

2.26

Gatwick is a main donor and board trustee of the Sussex Community Foundation which targets grants on voluntary, community and not-for-profit groups that work to improve the quality of life for people in West and East Sussex and Brighton & Hove.

2.27

Beyond funding, many Gatwick employees become involved in local community activities and team-building exercises that are designed to improve both the local environment and the quality of life of our neighbours. One group we work with on these activities is the Gatwick Greenspace Partnership.

2.28

We also play a leading role in the Gatwick Diamond Initiative: a business-led public/private partnership which drives programmes to ensure the region is a world-class place to live, work and do business.

OPERATIONAL RESILIENCE

2.29

Not only do we want to provide great service at Gatwick, but we want to do this every day. Our ability to deliver this is regularly tested by events including adverse winter weather and disruption to the road and rail networks and also by more unusual events such as volcanic ash clouds. Following disruption caused by early snow in the winter of 2010 the new management team carried out a comprehensive review of how we respond to adverse weather. This resulted in many changes including the acquisition of new snow clearing equipment; changes that helped us manage further snow falls in 2010 and 2011 with much less disruption. We will continue to give high priority to operational resilience and disruption recovery planning

3

Regulatory and legislative context

3.1

Introduction

3.1.1

The operation and development of Gatwick is a complex business. It is influenced, controlled and monitored by many organisations and stakeholders. This chapter of the master plan sets out some of the key matters which affect the airport including:

- Government policy on airport development and planning;
- local government planning policies;
- environmental controls;
- economic regulation;
- and safety and security regulations.

3.2

Government policy on airport development and planning

3.2.1

In 2003 the previous Government published the Air Transport White Paper, The Future of Air Transport (ATWP). The ATWP set out a strategic framework for the long term development of airport capacity in the UK for the period to 2030.

3.2.2

Five statements have particular relevance for Gatwick Airport:

- “The first priority in the South East is to make best use of the existing runways”
- “The Government will not seek to overturn the 1979 planning agreement preventing construction of a second runway at Gatwick before 2019”
- “In case the conditions attached to the construction of a third Heathrow runway cannot be met, and since there is a strong case on its own merits for a new wide-spaced runway at Gatwick after 2019, land should be safeguarded for this”
- “The option for two new runways at Gatwick is not supported”
- “The Government invites airport operators to bring forward plans for increased airport capacity in the light of the policies and conclusions set out in the White Paper”.

3.2.3

The ATWP also recommended that airport operators should prepare master plans which outline proposals for development and which would be available to all who might be impacted in some way by the plans. Accordingly, in October 2006, Gatwick Airport (then under BAA ownership) published its Interim Master Plan.

3.2.4

In May 2010 The Coalition Government published ‘Our Programme for Government’. Section 10 (Energy and Climate Change) states that “we will cancel the third runway at Heathrow” and “we will refuse permission for additional runways at Gatwick and Stansted”.

3.2.5

In December 2010 the Secretary of State for Transport announced that the Government will look to prepare a new “sustainable framework for aviation, which will support economic growth, as well as addressing aviation’s environmental impacts”.²..In 2011 the Government published and invited comments on a ‘scoping document’, which set out key themes and issues that the policy will need to address. The document stated that “the Government has committed to producing a sustainable framework for UK aviation to replace the previous administrations..white paper... some elements of the white paper might still be relevant”. At the time of the publication of this master plan the Government was due to have launched its consultation on sustainable aviation with a view to finalising its “sustainable framework for aviation” in March 2013.

3.2.6

In November 2011, the Chancellor of the Exchequer published the “National Infrastructure Plan 2011”. The document outlined that “the Government would develop a long term aviation strategy which will set out how [they] intend to address the UK’s airport capacity challenges... [the document] will explore all the options for maintaining the UK’s aviation hub status, with exception of a third runway at Heathrow”

NATIONAL PLANNING POLICY AND LOCALISM

3.2.7

The current Government has made a number of significant reforms to the planning system.

3.2.8

In March 2012 it published the National Planning Policy Framework (NPPF). The NPPF replaces and consolidates previous planning guidance set out in Planning Policy Statements and Guidance Notes, some of which dated back to the early 1990s. The NPPF sets out a new presumption on favour of sustainable development and outlines the economic, environmental and social objectives and policies that will guide local authorities in considering planning applications.

3.2.9

The NPPF does not change the statutory status of Local Authority prepared Development Plans as the starting point for decision making, and the legal requirement, as set out in Section 38(6) of the Planning and Compulsory Purchase Act 2004, that applications for planning permission must be determined in accordance with the development plan unless material considerations indicate otherwise.

3.2.10

The Localism Act (2011) aims to devolve power to local communities; a process often referred to as 'localism'. The Act introduces a number of reforms to the planning system, including the abolition of regional spatial strategies, such as the South East Plan, and their replacement with a 'statutory duty to cooperate' on the part of local authorities on the preparation of their Development Plans.

3.2.11

The Act also provides the statutory framework for a new local level of planning, known as 'neighbourhood planning'. This allows local communities to prepare neighbourhood plans within a given geographical area which will shape proposals for new development in their area.

3.2.12

The Act also introduces a new requirement for developers to consult local communities before submitting planning applications for certain types of development.

LEGISLATION DERIVED FROM EUROPEAN DIRECTIVES

3.2.13

Gatwick is subject to a wide range of legislation and regulation derived from Directives issued by the European Parliament & The Council that are specific to airport development and operation. In December 2011, The European Commission published proposals to reform the overarching EU regulatory framework for airport slot allocation, ground handling services and airport related noise restrictions.

3.2.14

If approved via the appropriate legislative process, it is likely that any revisions to the relevant Directives and regulations would be transposed into UK legislation following a period of public consultation. Their final form may have a material impact on Gatwick's passenger growth, and the on-going development of the airport and the airport's strategy for sustainable growth

3.3

Local government planning policies

3.3.1

Gatwick is located within the administrative areas of Crawley Borough Council (CBC) and West Sussex County Council (WSCC) and lies on the boundary with Surrey County Council. Mole Valley, Reigate and Banstead and Tandridge District Councils are nearby, while Horsham and Mid Sussex districts are to the south.

3.3.2

The plans and policies for the Crawley area are set out in CBC's Local Development Framework, Core Strategy, October 2008 Revision, and in saved policies from the Crawley Borough Local Plan (2000). Chapter 8 of the Core Strategy deals with Gatwick Airport and sets out the objectives, sustainable development approach, policies and matters related to safeguarding land for a possible second runway. Of particular importance are two policy statements:

G1

Within the airport boundary as set out on the proposals map, the Council will support the development of facilities which contribute to the safe and efficient operation of the airport as a single runway, two terminal airport, subject to satisfactory environmental safeguards being in place. In assessing whether or not particular uses are appropriate within the airport the Council will have regard to the advice in PPG 13⁵.

G2

The proposal's map identifies land which will be safeguarded from development which would be incompatible with expansion of the airport to accommodate the construction of an additional wide-spaced runway (if required by national policy) together with a commensurate increase in facilities contributing to the safe and efficient operation of the expanded airport in accordance with advice in PPG 13.

Minor development within this area, such as changes of use, and small scale building works, such as residential extensions will normally be acceptable. BAA Gatwick (now Gatwick Airport Limited) will be consulted on all planning applications within the safeguarded area.

3.3.3

The Core Strategy is in the process of being reviewed and a new draft for consultation is expected to be issued by CBC during 2012.

3.3.4

CBC has also prepared supplementary planning guidance on Gatwick. Adopted in November 2008, the supplementary planning document 'Development at Gatwick Airport', provides additional detail on the way in which the Council will implement the core strategy policies in dealing with planning applications, consultations and other planning matters at the airport.

OTHER DISTRICT POLICIES

3.3.5

A number of the neighbouring local planning authorities also include policies that have a bearing on Gatwick Airport's development. These plans recognise the economic importance of Gatwick as a main generator of economic growth in the region. There is acceptance of the principle that Gatwick will grow towards greater utilisation of the airport as a single runway and two terminal operation. They also acknowledge the environmental impact of the airport on the wider area and the development pressures it can create.

3.3.6

A number of the plans include policies to preclude airport related development, such as car parks in off-airport locations. We are keen to avoid sprawling urbanisation and in particular airport car parking located in the countryside. Some car parking takes place without planning permission and we are keen to work and assist councils to avoid this.

TRANSPORT PLANNING AND PROVISION

3.3.7

County councils are responsible for transport plans. The West Sussex Transport Plan 2011 to 2026 is of particular importance to Gatwick. The plan sets out the strategy for guiding future investment in West Sussex highways and transport infrastructure, and sets a framework for considering transport infrastructure requirements associated with future development across the county.

DEVELOPMENT CONTROL

3.3.8

Whilst many of the airport's developments require planning permission, some operational developments at the airport, that do not give rise to any significant environmental impacts, benefit from 'permitted development' powers conferred by the Town and Country Planning (General Permitted Development) Order ⁶. In cases where the permitted development powers are available there is a requirement to consult with Crawley Borough Council on the proposed development.

3.3.9

Some larger developments that could give rise to significant impacts on the environment require an environmental impact assessment (EIA) to be undertaken providing information on the likely environmental effects, for example, noise and air quality.

3.3.10

Major airport development, including a new terminal, runway or developments resulting in an increase of more than 10 million passengers a year are defined in the Planning Act (2008) as Nationally Significant Infrastructure Projects. These projects would not follow the normal local planning process but be administered by the Major Infrastructure Planning Unit (MIPU) within the government's Planning Inspectorate. Final decisions on such applications are made by the relevant Secretary of State.

SECTION 106 LOCAL AUTHORITY AGREEMENT

3.3.11

Gatwick Airport Limited signed a new legal agreement with WSCC and CBC on 15th December 2008 that runs to the end of 2015. The agreement outlines how the airport's operation, growth and environmental impacts will be managed responsibly. It underpins the important relationship between the airport owner and its local authorities with responsibility for planning, environmental management and highways. The new legal agreement, reached after a process of consultation and discussion with a wide range of stakeholders, contains far-reaching objectives and obligations. This legal agreement is also supported by a Memorandum of Understanding between WSCC and CBC and the adjoining authorities, to ensure that the interests of the adjoining authorities continue to be taken into account.

3.3.12

This new agreement builds on the original ground-breaking agreement that was entered into in 2001, and will bring significant benefits to the airport and the community it serves and affects. It demonstrates a desire for all those involved to see the airport grow to 40mppa, while balancing our environmental impacts. This legal agreement continues to define Gatwick's future and the role it will play in the local, regional and national economies.

3.4

Environmental controls

3.3.13

The principal objectives which are contained in the legal agreement are:

- the desire to see the airport continue to grow within the timeframe of the agreement to the annual throughput of 40 million passengers forecast in the Interim Master Plan in a one runway, two terminal configuration;
- the need to ensure that, as the airport grows, measures are in place to minimise, so far as possible, its short and longer term environmental impacts;
- and the importance of maintaining and enhancing the ways in which the parties to the agreement share information and work together, and with other stakeholders, to bring significant benefits to the airport and the communities it serves and affects.

3.3.14

The Section 106 agreement requires us to start the review of the terms of the agreement no later than 31st December 2013 or when we reach a throughput of 38mppa (whichever is the sooner). This will be undertaken in the light of the growth expectations existing at the time of the review which may include the prospect of growing beyond 40mppa.

3.4.1

Gatwick Airport's operations and development activity must be conducted in accordance with relevant primary (EU Directives transcribed in UK law) and secondary environmental legislation, as well as binding legal agreements with local authorities, addressing such matters as:

- air quality – which is subject to a national NO₂ limit applied to a designated Air Quality Management Area (AQMA);
- water discharge – which is subject to discharge consents relating to airport drainage into the River Mole, set by the Environment Agency;
- night noise and night flights – the Government restricts the number of flights that can use Gatwick at night, as well as the levels of noise that they can emit. These restrictions are to be reviewed by the DfT following the end of the current regime in 2012; the new regime being subject to public consultation.
- emissions trading – the airport's heating operations are subject to the EU ETS which in effect restricts the level of carbon we emit through their operation;
- flooding – as part of the planning process for any development the airport is required to demonstrate effective flood mitigation and put in place measures to reduce risk;
- climate change adaptation – as Gatwick is a designated airport under the Climate Change Act 2008; and
- waste management – the airport is required to comply with waste disposal and segregation guidance and duty of care legislation.

3.4.2

Further details on environmental controls that affect Gatwick are contained under the relevant sections of Chapter 9 'The Environment'.

3.5

Economic regulation

3.5.1

Airport charges are made to airlines wishing to use Gatwick. These cover our operating costs and finance a programme of capital investment, in a manner that satisfies airline expectations while meeting our reasonable costs.

3.5.2

Airport charges at London's three main airports are regulated by the CAA, and are normally reviewed at five-year intervals. The current period, quinquennium 5 (Q5), initially covered the period from 1st April 2008 to 31st March 2013. However, the CAA confirmed on 31st March 2011 its decision to extend Q5 at both Gatwick and Heathrow airports by a period of one year to 31st March 2014.

3.5.3

The charges to airlines at Gatwick for 2012 are:

- a charge for each departing passenger of £7.35 on domestic flights, £9.03 to Eire and £11.21 on other international flights;
- an aircraft weight-related charge on landing which varies depending on the noise classification of the aircraft and the landing time (in relation to time of day and the season). There is also an emissions charge at a rate of £4.80 per kg of NO_x;
- and an aircraft parking charge.

3.5.4

Airlines pay separately for the air traffic control services of the authorities responsible for the airspace through which they fly.

3.5.5

In light of the increased competition between airports in South East England, the CAA initiated work in November 2009 to consider how it should assess competition between airports and to investigate forms of regulation, alternative to its traditional approach to setting price controls.

3.5.6

This work will inform the CAA on which, if any, of the currently price controlled airports (Gatwick, Heathrow and Stansted) should continue to be subject to economic regulation from April 2014.

3.5.7

If the CAA concludes that Gatwick should be subject to economic regulation from April 2014 the permitted level of airport charges in the price control will be determined by a regulatory review which began in April 2012. In any event, the level of airport charges will in part depend on the competitive nature of the airport market, as well as the scale of future capital investment required to meet the needs of passengers and airlines. We, and our airline partners, have begun detailed discussions on this issue to assist the CAA's review.

THE CIVIL AVIATION BILL

3.5.8

In January 2012 the Government introduced the Civil Aviation Bill to Parliament. This seeks to implement the decisions of the previous Government's review of the economic regulation of airports, and aims to bring the overall principles behind airport economic regulation into alignment with other economically regulated sectors.

3.6

Airport safety and security

3.5.9

The Bill proposes modifications to the duties of the CAA, including a primary duty to further the interests of existing and future users by promoting competition. It also proposes the introduction of a flexible licensing regime; that the CAA will be required to justify the continued price controls at the end of each period; that there will be a right of appeal for interested parties and that it will be the responsibility of the Competition Commission (CC) to determine appeals of licence conditions and of the Competition Appeal Tribunal (CAT) to determine appeals of the CAA's decisions on competition and the need for regulation.

AVIATION TAX

3.5.10

The Government levies a tax on airlines known as Air Passenger Duty (APD). Airlines often pass these charges directly to passengers as part of the overall price of the ticket. At the time of writing, the relative amount per passenger ranged between £13 and £184 depending on distance travelled and class of travel.

SECURITY AND ASSOCIATED DEVELOPMENT REQUIREMENTS

3.6.1

Airport security requirements are subject to statutory regulation, which covers forecourt use, car parking, passenger search and techniques to be used, total segregation of departing and arriving air passengers in the airport's airside areas, airport boundary treatment and arrangements for staff. These requirements can lead to the need for infrastructure development, influencing the form and character of the airport facilities.

3.6.2

In 2011 the Government announced its intention to reform the regulatory regime for aviation security. It intends to introduce a system which focuses on clear security outcomes that an airport operator must achieve and moves away from prescribing specific processes. This may require a change to primary legislation to place a specific statutory obligation on an airport operator to meet a given outcome.

AIRFIELD SAFETY DESIGN CRITERIA

3.6.3

The UK is required to operate its airports in accordance with internationally agreed criteria and compliance is monitored by the CAA. Gatwick must operate in accordance with the terms of a licence issued by the CAA and, to obtain and retain that licence, Gatwick needs to satisfy the CAA's safety-related standards. Those criteria affecting the design of airports are detailed in a CAA publication, CAP168 Licensing of Aerodromes, and are subject to revision in the light of on-going monitoring and review, including international co-operation to consider developments such as the introduction of new aircraft, for example the A380.

AERODROME SAFEGUARDING

3.6.4

Gatwick is part of a statutory process whereby local planning authorities consult with Gatwick on any planning applications that may have an impact on the safety of the airport operation. This process is known as aerodrome safeguarding⁷. Approximately 160 applications per year are assessed by Gatwick as part of these obligations. Aerodrome Safeguarding is intended to:

- ensure that the airport's operations remain safe from proposed developments (for example tall buildings) which might infringe the airport's protected airspace, known as the aerodrome's obstacle limitation surfaces;
- ensure that pilots on approach to the airport can see the runway lighting (i.e. ensure that it does not become obscured by proposed development)
- protect the accuracy of radar and other electronic aids to air navigation (for example, wind farm turbine blades can obscure aircraft on air traffic controllers' radar screens);
- and reduce the hazard from bird strikes to aircraft engines by reducing the likelihood of bird activity at land uses such as waste disposal sites, sewage treatment works, areas of water and landscaping schemes.

3.6.5

We make every effort to engage with developers at an early stage on aerodrome safeguarding issues. By working with both the developers and Planning Authorities we are often able to agree modifications to development proposals such that they do not compromise airport safety. Examples might include, reducing the height of buildings, netting water features, recommending the use of other tree species and establishing a bird control regime. In some cases, these measures prove insufficient and it becomes essential for Gatwick to object to a planning application on grounds of a potential risk to safety.

3.6.6

Safeguarding requirements related to the possible development of a second runway at Gatwick are addressed in Chapter 10.

PUBLIC SAFETY ZONES

3.6.7

The risk of air accidents occurring at, or within close proximity to, airports, while extremely low, is such that the use of land at the ends of the runway is restricted⁸. These designated areas are known as Public Safety Zones (PSZs). The Government aims to ensure, through planning policy, that there is no increase in the number of people living, working or congregating in PSZs and that, over time, the number should be reduced as circumstances allow.

3.6.8

The PSZs are defined by the CAA following a study of the risk of death or injury to people on the ground in the event of an aircraft accident on take-off or landing at the UK's busiest airports. The CAA periodically review and update the size of the PSZs based on the forecast number of aircraft movements, the types of aircraft and whether the flights are for the carriage of passengers or cargo.

3.6.9

Gatwick's PSZ's were updated by the CAA in 2011 based on traffic forecasts supplied by Gatwick Airport Limited. The latest contours show a reduction in the size of the PSZs owing to forecast changes in traffic mix which generate a lower risk profile for the airport. The new PSZ contours are available from the CAA and can be requested by sending an e-mail to psz@caa.co.uk.

3.6.10

The PSZs, which are close in shape to an isosceles triangle, comprise an inner area and an outer area. The inner area closest to the runway is where the risk of an accident is greatest. No people occupy residential or commercial properties in this area. In the outer area, PSZ policy requires that the number of people present should not increase and that no new development which could be occupied by people should be granted planning permission.



4

Gatwick traffic characteristics and forecasts



4.1

Traffic characteristics

GATWICK'S ROLE

4.1.1

Gatwick is the UK's second busiest airport. It is a vital part of the UK's transport infrastructure and while it offers more travel destinations than any other London airport its operations are very much aligned to the needs of those travelling to and from London and the South East.

4.1.2

Much of the information presented in this section comes from the CAA which has recently published traffic data for 2011. For consistency all the traffic statistics in this section relate to the 2011 calendar year. However please note that GAL's traffic forecasts are prepared for a financial year period (1st April to 31st March) and all the traffic forecasts referred to in the next section relate to financial years not calendar years.

4.1.3

In 2011 Gatwick handled 33.7 million passengers. While this is 4.3% fewer than its peak of 35.2 million in 2007, it shows a strong recovery from 31.3 million in 2010. The total number of aircraft movements was 251,070 and cargo carried was 88,214 tonnes.

4.1.4

The 2011 total of 251,070 aircraft movements comprised:

- 244,364 Passenger Air Transport Movements (PATMs), giving an average aircraft load of 138 passengers. These flights also carried the great majority of Gatwick's freight as belly-hold cargo;
- 377 Cargo Air Transport Movements (CATMs). These were a mixture of international flights, and domestic and Channel Island flights;
- 2,101 General Aviation (GA) and air taxi movements
- and 4,228 other flights, the majority by empty civil aircraft on positioning flights.

PASSENGERS

4.1.5

Most passengers travel from residences, hotels, and businesses within London and the South East. In 2011 63.0% of all Gatwick passengers had their journey origins, or destinations, in London and the counties to the south and east, 28.8% in other areas of the UK and 8.2% were transferring between flights. More detailed information on the distribution of passengers' origins/destinations is shown in *Figure 4.1*.

✈ FIG 4.1

Distribution of the origins/destinations of Gatwick's 2011 non-transfer passengers. Ranked % of UK total



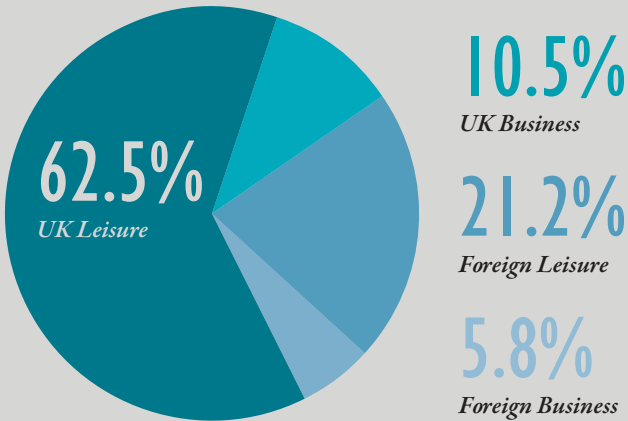
Source: CAA 2011 Passenger Survey.

4.16

The majority of Gatwick's passengers are travelling for leisure and are residents of the UK. However the proportion of both business and non-UK passengers is increasing. The proportion of business travellers increased from 14.3% in 2010 to 16.3% in 2011 and the proportion of non-UK passengers increased from 23.4% in 2010 to 27% in 2011. *Figure 4.2* shows the breakdown by passenger type in 2011.

LGW PASSENGER TYPE:

✈ FIG 4.2
Reason for journey (excluding transfer passengers)
Source: CAA 2011 Passenger Survey



4.17

Figure 4.3 shows the changes in annual passenger throughput over the last twenty years.

✈ FIG 4.3
Annual passengers figures
1990 – 2011

YEAR	Total passengers (Millions)	Total
90	21,047,000	21,047,000
91	18,690,170	18,690,170
92	19,842,372	19,842,372
93	20,065,348	20,065,348
94	21,051,044	21,051,044
95	22,382,597	22,382,597
96	24,106,098	24,106,098
97	26,795,452	26,795,452
98	29,034,312	29,034,312
99	30,406,566	30,406,566
00	31,946,546	31,946,546
01	31,098,403	31,098,403
02	29,519,294	29,519,294
03	29,895,312	29,895,312
04	31,388,800	31,388,800
05	32,703,003	32,703,003
06	34,091,516	34,091,516
07	35,168,306	35,168,306
08	34,178,563	34,178,563
09	32,369,935	32,369,935
10	31,348,114	31,348,114
11	33,652,252	33,652,252

Source: GAL.

AIRLINES

4.18

One of Gatwick's strengths is its range of airline services and routes. Typically during 2011 Gatwick was served by 60 regularly operating passenger airlines, comprising a mix of full service, low cost, and charter airlines. On average, passenger airlines operated 670 daily flights and served over 200 destinations – more destinations than any other UK airport. In comparison, Heathrow operated an average of 1,305 daily flights, with 89 airlines flying to 176 destinations, while Stansted operated 375 daily flights on average, with 13 airlines serving 150 destinations.

4.1.9

Gatwick's two largest carriers account for just over half the passenger traffic at Gatwick. easyJet is the largest, accounting for 37% of passenger traffic, while British Airways accounts for 14%. *Figure 4.4* shows the top 12 airlines by volume of traffic.

ROUTES

4.1.10

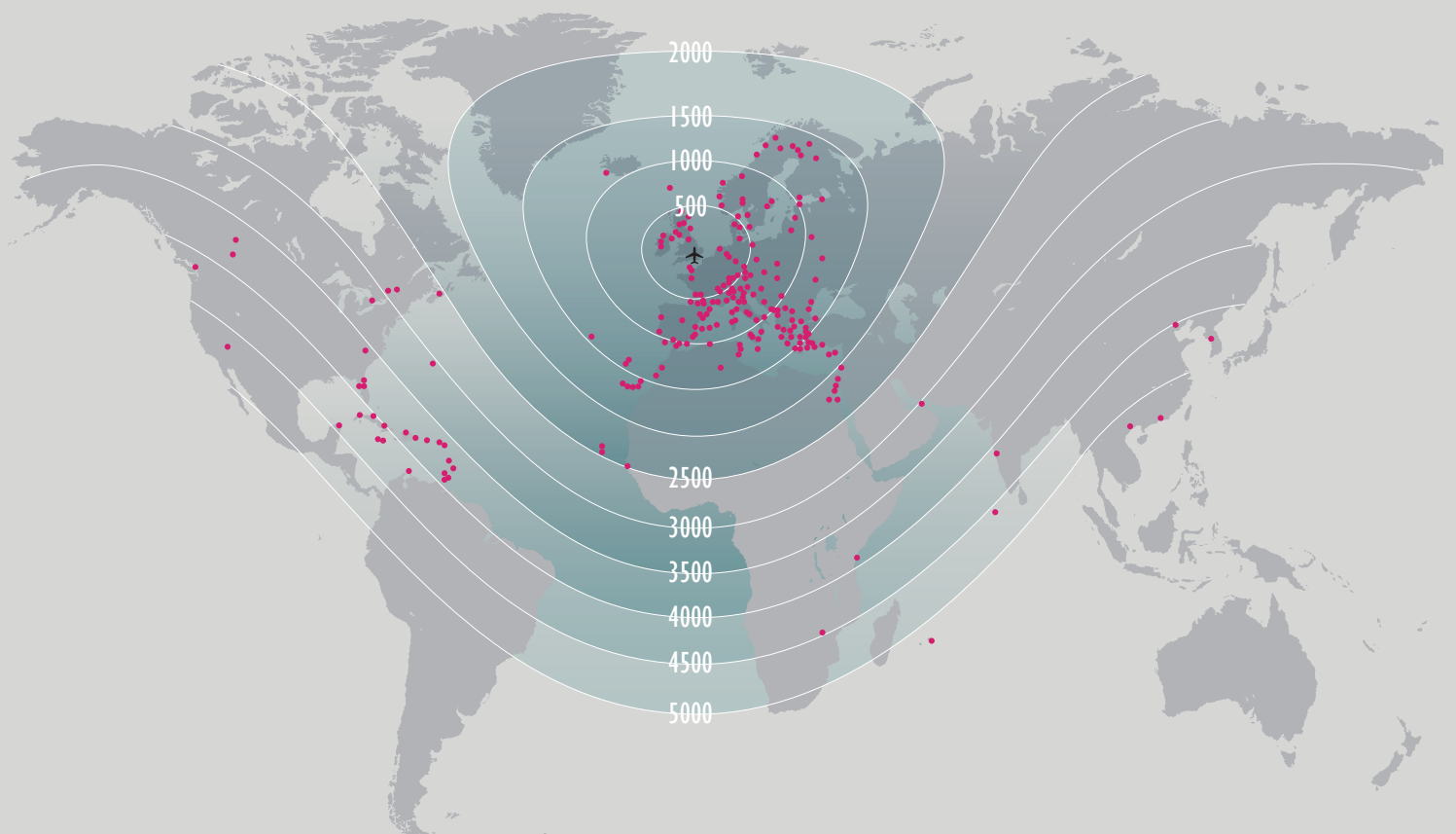
In 2011 airlines operating at Gatwick flew at least one flight a week to over 200 destinations (see *Figure 4.5*). In 2011 89.0% of passengers travelled on international services and 11.0% on domestic. The majority of passengers were on short-haul routes to destinations in the UK and Europe, though a number of long-haul destinations such as Dubai, Orlando, Sharm el Sheikh and Bridgetown are among Gatwick's busiest services.

✈ FIG 4.4
Passenger volumes by airline (2011)

AIRLINE	% of total
easyJet	37%
British Airways	14%
Thomsonfly	8%
Monarch	6%
Thomas Cook Airlines	6%
Ryanair	5%
Virgin Atlantic	4%
Flybe	4%
Norwegian Air Shuttle	3%
Aer Lingus	2%
Emirates	2%
TAP Air Portugal	1%
Other	8%
All Airlines	100%

Source: GAL.

✈ FIG 4.5
Destinations served 2011



AIRCRAFT

4.1.11

The variety of aircraft types operating at Gatwick reflects a diverse mix of airlines and routes. Narrow-body jet aircraft such as the Boeing 737 and Airbus A320 are the most common type, reflecting the dominance of short-haul operations. These account for 78.8% of total passenger operations.

4.1.12

Wide-body jet aircraft such as the B777 and B747 account for 8.1% of passenger operations and are typically deployed on long-haul routes to North America, the Caribbean, and the Middle East.

4.1.13

Regional jets and turboprop aircraft account for approximately 12.1% of passenger operations. Flybe is the main regional jet and turboprop operator, with the majority of flights on domestic routes.

✈ FIG 4.6
Aircraft fleet mix, 2011
Source: GAL

8.1%

Widebody-Jet (B777, B747, A330)



78.8%

Narrowbody-Jet (A319, A320, B737, B757)



4.8%

Regional Jet (Embraer 195)



7.3%

Turboprop (ATR72, Dash 8)



1.0%

Unclassified

4.2

Traffic forecasts

4.2.1

In 2011 we commissioned ICF SH&E, a leading aviation consultancy company, to produce air traffic forecasts for Gatwick and these were published in the Draft Master Plan. These forecasts represent an objective and independent assessment of the levels of traffic that can be expected in the future. Subsequently, we invited ICF SH&E to update their forecasts in early 2012. These latest forecasts are described below along with the economic assumptions that underpin them. It is worth noting that they show a slight slow-down in growth projections in the medium to long term owing to the prolonged recovery from worldwide recession and recent upsets such as the Euro crisis. For example we now expect to reach a throughput of 40mppa in 2021/22 rather than 2020/21 as envisaged in the Draft Master Plan. As the achievement of 40mppa is a key milestone target for Gatwick, the forecasts description below includes comparisons between the actual traffic experienced in 2011/12 and that expected in 2021/22 with a passenger throughput of 40mppa.

FORECASTING APPROACH

4.2.2

The forecasting approach takes into account the major drivers of aviation demand and supply in the London market and apportions Gatwick's estimated share.

4.2.3

For 2012/13 to 2014/15 the forecasts are produced on an airline by airline basis, using the latest available schedule, fleet, financial performance and market insights from ICF SH&E and GAL's Business Development Team together with known capacity changes for the current year (2012/13) and expectations of further service growth over the next two years.

4.2.4

From 2015/16 onwards, the long term view is developed at a macro level, forecasting demand for the entire London market on an unconstrained basis initially, before applying known and expected capacity constraints at each airport and redistributing demand where it cannot be accommodated.

Future growth in demand is expected to be more modest relative to economic growth than that observed historically. The GDP forecast used is a consensus view based on the latest available published forecasts from EIU, IMF OBR and ICF SH&E assumptions and reflects the weakened near to medium term economic outlook. The forecasts also take account of the cost of flying, governed by the increasing oil price and taxation in the form of EU Emissions Trading and APD.

4.2.5

Since the production of these new forecasts, the overall economic outlook has deteriorated, with a growing consensus around subdued short term growth and question marks around the extent and speed of any recovery. The fortunes of the Eurozone will be critical and the likely future sale of Stansted Airport by BAA will intensify the competition with Gatwick for airlines and passengers. These current uncertainties make traffic forecasting particularly challenging at this time.

4.2.6

ICF SH&E's Low Case represents a set of negative yet conceivable circumstances, whereby the rebound from the recent downturn is slow and prolonged, and the long term average rate of growth is weakened by economic volatility and potential negative shocks to demand.

4.2.7

In contrast, the High Case illustrates the volumes that may be expected if a more positive set of circumstances materialise, representing an optimistic but achievable growth path. In this scenario, a robust near-term rebound is assumed, coupled with on-going successes in attracting new carriers and routes to Gatwick following development of a stronger air service marketing approach. Over the longer term, market maturity and capacity constraints are still modelled, but to a lesser degree than in the Base Case.

4.2.8

The Base Case represents ICF SH&E's most likely forecasts, taking a balanced view of demand and supply side factors driving future traffic volumes at Gatwick.

PASSENGER DEMAND FORECASTS

4.2.9

For this exercise it was assumed that there will be no new runways in the South East and no “mixed mode” runway operation at Heathrow during the forecast period.

4.2.10

As local markets grow beyond the capacity of individual airports, the unfulfilled demand will either spill to another airport or will be lost to the wider market. With a single runway Gatwick has sufficient runway capacity until around 2024/25 when some traffic is expected to be forced elsewhere

✈ FIG 4.7

Gatwick constrained passenger demand

YEAR	GATWICK PASSENGERS		
	<i>(mppa)</i>		
	<i>Low case</i>	<i>Base case</i>	<i>High case</i>
2011/12 <i>actual</i>	33.8	33.8	33.8
2012/13	33.8	34.3	35.2
2013/14	34.0	35.2	36.7
2014/15	34.2	35.7	37.8
2015/16	34.3	36.0	38.8
2016/17	34.6	36.4	39.7
2017/18	34.8	36.8	40.4
2018/19	35.1	37.2	41.1
2019/20	35.5	38.1	41.8
2020/21	35.9	39.1	42.4
2021/22	36.4	40.2	43.1

✈ FIG 4.8

DfT forecasts of Gatwick constrained passenger demand

PASSENGERS (MILLIONS)	GATWICK AIRPORT		
	<i>Low</i>	<i>Base</i>	<i>High</i>
2010	30	30	30
2020	35	40	40
2030	40	40	40
ATMS (000S)			
2010	240	240	240
2020	N/A	260	N/A
2030	260	260	260

Source: DfT UK Aviation Forecasts – August 2011

DEPARTMENT OF TRANSPORT FORECASTS

4.2.11

In August 2011 the DfT published a set of updated air traffic forecasts reflecting their assessment of how activity at UK airports is likely to change in the future, assuming no new runways at Heathrow, Gatwick or Stansted (see [Figure 4.8](#)). These show broadly similar passenger numbers to the ICF SH&E forecasts for 2020 although the annual air transport movements (ATMs) are lower. The DfT has assumed a maximum annual ATM limit of 260,000, an assumption that we believe dates back to the South East and east of England Regional Air Services (SERAS) study published in 2002. The independently produced ICF SH&E forecasts included in this chapter assume that this level of annual movements can be exceeded given the right mix of airlines and traffic.

FORECAST OF AIRCRAFT MOVEMENTS

4.2.12

The annual number of aircraft movements at Gatwick in the future will be heavily influenced by the capacity constraints of a single runway. Runway capacity is usually measured in terms of how many aircraft movements can be scheduled in a given time period, but this varies by time of day owing to hourly changes in the traffic mix.

4.2.13

Over time the peak number of scheduled movements per hour has increased as we have found ways to operate the runway more efficiently. Our air navigation service provider, NATS, has been instrumental in making these improvements possible. For the summer 2012 scheduling season the maximum number of scheduled movements in any one hour is 53, although this only occurs in a single hour. We expect an average of 45 movements per hour over the 17 hour operating day on a typical busy summer day in 2012

4.2.14

Owing to the safety standards set by the CAA, there is a limit to the number of movements that can be handled on one runway. These safety standards are mandatory and our growth forecasts do not require any changes to be made to these standards. As we get closer to this theoretical capacity limit (which varies according to aircraft fleet mix and a number of other factors) it becomes much more difficult to add further scheduled movements.

4.2.15

There is a risk that if too many movements are scheduled Gatwick will lose its resilience to causes of operational disruption, for example, bad weather, resulting in delayed flights.

4.2.16

We want to maintain high standards of punctuality and will avoid anything that compromises this, so a balance needs to be struck between scheduling additional movements and operational performance.

4.2.17

We believe that some further, small, improvements in peak capacity may be possible over time but these will be limited to one or two additional movements in peak hours and a small increase in the number of hours of the day operating at this maximum level. Even this scale of capacity increase will require careful analysis and changes in processes and infrastructure. However, our intention is to make best use of the single runway which means optimising the capacity potential, while meeting our sustainability objectives and retaining a resilient operation.

4.2.18

A further consideration is the availability of adequate capacity in UK airspace to accommodate any growth in aircraft movements. In late 2010 the CAA published the consultation document 'Future Airspace Strategy for the UK' for the modernisation of UK airspace around the themes of safety, capacity and environmental performance. We have responded in detail, welcoming the draft strategy which we see as an important first step to creating a new national airspace plan for the UK.

4.2.19

We will continue to work closely with both the CAA and NATS to ensure that the potential capacity of Gatwick's runway is matched by an equivalent capacity in the local airspace.

 FIG 4.9

Aircraft movements (Base case)

	2011 <i>(actual)</i>	2011/12 <i>(actual)</i>	2021/22 <i>(forecast)</i>
AIRCRAFT MOVEMENTS			
Passenger ATM's	244,364	242,144	272,180
Cargo ATM's	377	354	380
Other movements	6,329	6,181	6,396
TOTAL	251,070	248,679	278,956

4.2.20

Our forecasts for the maximum number of passenger air transport movements therefore take into account:

- the current declared average hourly runway capacity
- historic evidence of Gatwick's ability to gain incremental increases in runway capacity across the day through improved runway utilisation and reduced runway occupancy times;
- assumptions on how much the current peak activity level can be spread across the day;
- and an assumed change in the pattern of traffic over the year with a modest increase in the proportion of traffic handled during the less busy seasons.

4.2.21

Based on these assumptions the expected number of passenger air transport movements is in the region of 272,200 movements per annum by 2021/22.

4.2.22

This implies that the average load, which was 140 passengers in 2011/12, will rise to 148 in 2021/22. This increase is expected to be achieved through a combination of higher load factors and increasing seats per aircraft movement, as airlines up-size their fleets over time.

4.2.23

As the runway becomes more constrained, the number of cargo movements and other movements are expected to decline to reflect this.

4.2.24

For the purposes of these forecasts there is no assumption of an increase in night movements above the current night quota applying between 23:30 and 06:00. These night quotas, set by the DfT, are 11,200 flights during the summer and 3,250 flights during the winter season.

4.2.25

Over the forecast period, the mix of routes is expected to change as Gatwick attracts new long-haul services. There is the potential for long-haul leisure markets to shift from Heathrow to Gatwick and potential for more long-haul services from Gatwick to some of the world's fastest growing economies. Already Gatwick has been successful in attracting new carriers. Within the European short haul market Lufthansa now operate to Frankfurt and Turkish Airlines operate to Istanbul while four new Far Eastern carriers have commenced long haul services; Vietnam Airlines to both Hanoi and Ho Chi Min City, Hong Kong Airlines (all business class service to Hong Kong), Korean Air to Seoul and Air China to Beijing.

4.2.26

In 2011/12 6.2% of all passenger ATMs at Gatwick were destined for scheduled long-haul markets. By 2021/22, long-haul destinations are expected to account for 8.2% of passenger ATMs although it should be noted that a higher proportion of charter traffic will also be flying on long-haul routes (about 15% of charter total).

4.2.27

Within the next few years, the A380, the largest commercial passenger aircraft in the world with a wingspan of 79.8 metres, is expected to operate regularly at Gatwick. However, our airfield layout is not entirely compatible with the standards required to accommodate the A380, so some minor improvements will be needed. Planning permission for scheduled A380 operations at Gatwick was granted in 2010.

4.2.28

Additionally, next generation long-haul aircraft such as the B787 are forecast to operate at Gatwick by 2013. These aircraft typically have wider wingspans than the aircraft they are designed to replace. As a result, some changes to airfield layout will be needed.

4.2.29

Figure 4.10 shows how the passenger air transport movements are expected to be split between different markets.

AIR PASSENGER TYPES

4.2.30

In the ICF SH&E forecasts, there are no significant, assumed changes to the proportion of transfers at Gatwick (currently 8.2%) or the mix of UK/foreign and business/leisure passengers (the current mix being shown in Figure 4.2). ICF SH&E assumed these splits would remain static over the forecast period.

4.2.31

However these assumptions do not take account of the rapid growth in long haul achieved in the latter part of 2011 nor any further success in attracting business traffic to Gatwick as a result of our marketing initiatives. We hope that by providing the right services and incentives we can grow our share of business passengers over time. It is worth noting that in the last 12 months, the proportion of non-transfer passengers traveling on business through Gatwick has increased from 14.3% to 16.3%.

 FIG 4.10

Passenger ATMs by market segment

ATM'S	2011/12 (actual)	% of Total	2021/22 (forecast)	% of Total
Domestic	44,877	18.5%	46,036	16.9%
Short-haul	157,982	65.3%	182,811	67.2%
Charter	24,272	10.0%	21,065	7.7%
Long-haul	15,018	6.2%	22,257	8.2%
TOTAL	242,149	100%	272,169	100%

AIR CARGO

4.2.32

Cargo tonnage is forecast to grow by 48% between now and 2021/22 as shown in Figure 4.11. However, overall volumes remain small as runway capacity constraints and the expected market conditions are unlikely to support any increase in the number of freighter aircraft operations at Gatwick.

4.2.33

While we are not expected any growth in freighter movements, some growth in cargo tonnage is possible as this can be carried in the belly hold of passenger flights. The anticipated increasing in the number of passenger aircraft flying on long-haul routes will be particularly important in carrying this additional cargo. Therefore the forecast growth in cargo does not result in a meaningful increase in flights, either during the day or night, it is instead a bi-product of the forecast growth in long-haul passenger traffic.

 FIG 4.11

Air cargo

	2011/12 (actual)	2021/22 (forecast)
Annual Cargo (tonnes)	88,111	130,372

GATWICK AIRPORT EMPLOYMENT

4.2.34

Baseline employment statistics taken from the most recent Gatwick Airport Employment survey (2012) show that approximately 21,000 people are employed on the airport campus. This shows a decline from the 22,700 people recorded in the 2008 survey. This decline can be largely explained by the following:

- the 2008 survey followed what is still the busiest year in Gatwick's history, with 35.2mppa in 2007. We have still not recovered to those traffic levels;
- the 2008 employment survey immediately preceded the start of the financial crisis;
- several airlines stopped operations in 2008 including Sterling and Excel;
- and in 2008 Open Skies resulted in many US airlines moving to Heathrow with the vacated runway slots being back-filled with low-cost, shot-haul operations, a characteristic of which is high levels of staff productivity.

The latest forecasts from ICF SH&E indicate direct on-airport employment increasing to 22,200 in 2021/22 (40mppa).

4.2.35

The forecasting approach was to split the direct on-airport employment base data into various function groups, e.g. Air Cabin Crew and Airport/Airline Management. Employment was forecast by assuming for each grouping an appropriate growth rate relative to airport traffic growth as indicated by historical patterns and experience at other airports and a reasonable degree of productivity improvement depending on the nature of the job and known advances in technologies (e.g. self-service check-in). The resulting forecasts (see [Figure 4.12](#)) show an average growth rate of 0.5% p.a. up to 2021/22 (40mppa) with an implied average rate in productivity of 1.2% p.a. giving an employment total of 22,200. This is a reduction from the figure given in our draft master plan owing to the latest employment survey results.

ON-AIRPORT CAR PARKING

4.2.36

Car parking demand closely follows the pattern of passenger throughput with strong peaks, particularly in long stay car parks during the peak summer months and during the main holidays.

4.2.37

However, we don't expect this relationship to remain constant over the forecast period. In line with the growth in off-peak demand assumed in the aircraft movement forecasts, a degree of off-peak car parking demand growth is expected. This, in addition to Gatwick's objective of encouraging more use of public transport, should result in a gradual decrease in the ratio of annual passengers to peak car parking spaces demanded.

4.2.38

The car park demand forecasts shown in [Figure 4.13](#) are projections of how the current on-airport demand is expected to grow over time. They make no allowance for an increase in the proportion of total parking demand accommodated on-airport through, for example, the enforced closure of unauthorised off-airport car parks.



✈ FIG 4.12

Gatwick employment forecasts (base case forecasts)

GATWICK EMPLOYMENT	2011/12 (actual)	2021/22 (forecast)
Direct on-airport	21,000*	22,200*
Direct off-airport	2,200	2,100
Indirect	2,900	2,800
Induced	15,600	16,300
TOTAL	41,700	43,400

* Source: ICF SH&E. All other employment forecasts from Optimal Economics (see Chapter 8 for more information on these) (Numbers rounded).

✈ FIG 4.13

Car parking forecasts (base case forecasts)

		2011/12 (actual)	2021/22 (forecast)
South	Short Stay	2,469	2,649
	Long Stay	12,425	13,756
	Valet	883	947
North	Short Stay	1,725	2,021
	Long Stay	11,527	14,109
	Valet	1,014	1,188
TOTAL		30,043	34,671

* Source: ICF SH&E



5

Gatwick infrastructure



5.1

Introduction

5.1.1

In this chapter we describe the airport as it is today and the infrastructure development projects we currently have in place. For comparison with the 2006 Interim Master Plan, we've divided the airport into the same eight categories of land use. A description is provided of the key features contained within each of these categories. This is followed by a description of the general principles we adopt to guide the physical development of the airport and a description of the most significant current construction projects.

5.2

Existing airport infrastructure

5.2.1

Figure A.1 shows Gatwick in relation to its local setting. Horley, in Surrey, lies on the northern boundary and Crawley, in West Sussex, lies to the South. The London to Brighton railway line runs north-south to the east, as does the M23 motorway. The River Mole flows from south to north through the western part of the airport, passing beneath the runway in a culvert. Two tributaries, Crawters Brook and Gatwick Stream, flow around the boundary.

5.2.2

The airport boundary is largely based on the Gatwick Airport Limited (Gatwick) land holding. While Gatwick owns the freehold interest in the majority of this land, some areas are the subject of very long term lease agreements, removing them from Gatwick's day-to-day control. For example, the land occupied by the cargo sheds and associated facilities.

5.2.3

The existing boundary is slightly different from that shown in the 2006 Interim Master Plan, reflecting land acquisitions and disposals that have taken place since then. It should also be noted that this boundary is not the same as that shown in Crawley Borough Council's Local Development Framework Proposals Map, which excludes some Gatwick-owned land and includes some land owned by others.

5.2.4

Figure A.2 shows the existing airport layout which is divided into eight categories:

1. *Airfield (228 hectares (ha))*
Runway, taxiways, safety areas, and the extensive grass areas that surround them.
2. *Passenger terminals (18 ha)*
Including the terminal processor buildings and their adjacent and associated facilities.
3. *Aprons (161 ha)*
Aircraft aprons and the terminal piers through which the majority of passengers enter and leave their aircraft.
4. *Cargo (11 ha)*
Air cargo facility, associated truck dock and landside facilities.
5. *Maintenance (9 ha)*
Aircraft maintenance hangars and associated aircraft aprons.
6. *Ancillary (33 ha)*
Ancillary activities, such as vehicle maintenance depots, flight catering facilities, offices and hotels.
7. *Surface transport facilities (145 ha)*
Roads, car parks and facilities for coaches, taxis and rental cars.
8. *Landscaping and surface water drainage (132 ha)*
Airport boundary, areas of planting or natural vegetation and features associated with surface water drainage.

5.2.5

There is a further 22 ha of unallocated land within the airport boundary. This comprises land to the east of Brockley Wood and land to the south of the runway previously used for aircraft maintenance. Most or all of this land will be brought into use (or returned to use) at some time in the future.

5.2.6

The total area of the airport defined by the boundary shown in [Figure A.2](#) is 759 ha. This compares with 748 ha quoted in the 2006 Interim Master Plan⁹. The difference can be attributed to some land ownership changes on the boundary as mentioned above.

5.2.7

The following section describes the key facilities and features within each of the eight land-use categories. These are also identified in [Figure A.3](#).

AIRFIELD FACILITIES

5.2.8

Gatwick's airfield extends over an area of 228 ha, slightly less than one third of the land within the airport boundary. It contains the airport's primary and standby runways, the northern parallel taxiway, and extensive grass areas surrounding these facilities, a variety of navigational and landing aids and the airport's fire training area.

5.2.9

The primary runway is an instrument runway (suitable for operations in low visibility conditions) with a pavement length of 3,316m. It is designated 08R/26L meaning that, when the wind is from the east, aircraft using the runway operate on a heading of 080° and, when the wind is from the west, aircraft operate on a heading of 260°. The prevailing wind conditions mean that, in a typical year, the runway is used in the westerly (260°) direction for approximately 73% of the time. However this does vary by year. In 2010 81% of operations were in this direction.

5.2.10

The parallel standby runway (designated 08L/26R) is only used when the primary runway is closed for planned maintenance or for an unplanned closure. 08L/26R is a visual runway (it cannot be used in low visibility conditions) with a pavement length of 2,565m. In 2011 only 1% of total movements took place on the standby runway.

PASSENGER TERMINALS

5.2.11

Gatwick has two passenger terminals, North Terminal, which opened in 1988 and South Terminal, which opened in 1958. Along with their associated facilities the terminals occupy approximately 18 ha of airport land. North Terminal and South Terminal have gross floor areas of approximately 97,500m² and 160,000m² respectively. The floor area quoted for North Terminal includes the area of the new extension opened in 2011.

5.2.12

South Terminal currently accommodates more than half of Gatwick’s annual passenger traffic, with approximately 18mppa, while North Terminal currently accommodates approximately 15.5mppa.

5.2.13

Associated facilities within the passenger terminal, land use category, include office buildings, baggage handling facilities, boilers and chillers and air/cabin crew reporting facilities.

5.2.14

The train station adjacent to South Terminal (owned by Network Rail) provides access to a range of rail services including the Gatwick Express service to London Victoria as well the Southern Railways and First Capital Connect networks. Both terminals also provide access to local and regional bus and coach services.

5.2.15

Our terminals are connected by an automated people mover system known as ‘the shuttle’. This has two three-car trains running every few minutes. The shuttle was upgraded in 2010 at a cost of £47 million.

APRONS AND PIERS

5.2.16

Gatwick’s apron area currently extends to 161 ha comprising:

- Aircraft parking stands37%
- Taxiways52%
- Fuel farm6%
- Piers, fire station, control tower, etc5%

5.2.17

Current stand provision is detailed in *Figure 5.1*, with examples of aircraft types suited to the various sizes of stand. Where stands can cater for different size aircraft the largest type is assumed, so while 115 stands are identified, our aprons could theoretically accommodate up to 150 smaller aircraft. The current work to upgrade Piers 1 and 5 is changing the number of stands in operation at any time. The stand numbers shown in *Figure 5.1* reflect the situation before work started on these two projects.

 FIG 5.1
Current stand provision

YEAR	CODE CODE CODE CODE				TOTAL
	C	D	E	F	
Pier 1	8	-	-	-	8
Pier 2	9	2	8	-	19
Pier 3	-	-	8	-	8
Pier 4	-	1	8	-	9
Pier 5	4	2	6	-	12
Pier 6	7	2	2	-	11
Remote	2	18	26	2	48
TOTAL	30	25	58	2	115

Example aircraft:
 Code C: A319/320, B737
 Code D: B757, B767
 Code E: A330, A340, B747, B777, B787
 Code F: A380

¹⁰ As part of the Q5 regulatory decision, the CAA adopted the general principle that 95% of passengers should receive pier service. However, the actual target changes by year to reflect the impact of planned pier construction activity.

5.2.18

Aircraft stands are classified as 'pier-served' or 'remote'. Pier-served stands mean passengers can walk (via piers) between the aircraft and the terminal, while on remote stands passengers use an airside coach to travel to and from the aircraft.

5.2.19

Most, but not all, pier-served stands at Gatwick have loading bridges providing a covered route between the pier and the aircraft. Where loading bridges are not provided, passengers access the aircraft via the apron and mobile stairs. In the latter case, special vehicles are used for Passengers with Reduced Mobility (PRM). Both solutions are termed 'pier service', and the number of pier-served stands at Gatwick is sufficient to achieve our standard that 95%¹⁰ of passengers at each terminal should receive pier service.

5.2.20

Remote stands are used for long stay parking and aircraft are regularly towed between remote stands and pier-served stands in order to achieve pier service targets.

5.2.21

The Apron also includes Gatwick's fuel farm (approximately nine ha), airport fire station and the NATS control tower.

CARGO FACILITIES

5.2.22

The Cargo Centre covers some 11 ha. This is made up of a 23,000m² of cargo shed, office accommodation, areas for HGV loading, unloading and parking, and open equipment parking areas.

5.2.23

Gatwick's current cargo throughput of around 88,000 tonnes is little more than a quarter of what was achieved in the peak of 2001 (approx. 320,000 tonnes p.a.). While we are expecting the cargo throughput to grow, it is unlikely that an expansion of the cargo facilities at Gatwick will be needed for very many years.

5.2.24

The cargo sheds are not owned by Gatwick, but by a third party with a long term ground lease. Gatwick has no direct commercial involvement with the cargo operation, although we do manage the Border Inspection Post located there, which is used for temporary storage, inspection and clearance of live animals and foodstuffs.

AIRCRAFT MAINTENANCE

5.2.25

Over recent years there has been a reduction in hangar provision at Gatwick with the demolition of some old facilities south of the runway. British Airways now operates the one remaining hangar in this location on a 5 ha site. There is a second maintenance hangar (approx. 4 ha) to the north of the runway, currently operated by Virgin Atlantic Airways.

5.2.26

While there has been a decline in overall hangar provision, it is essential that airlines have access to maintenance infrastructure, so additional hangars could be needed as traffic increases.

ANCILLARY ACTIVITIES

5.2.27

Examples of ancillary activities needed within the airport boundary include:

- Hotels
- Offices
- Vehicle and equipment maintenance
- Contractors compounds
- Filling stations
- Police station

5.2.28

A number of separate on-airport sites of approximately 33 ha accommodate these activities.

SURFACE TRANSPORT FACILITIES

5.2.29

Gatwick has excellent surface transport links. The airport is located around 25 miles south of central London and is well connected to the motorway network via the M23 and M25. It has one of the UK's busiest rail lines and the station is the busiest UK airport rail station with over 12 million rail users every year. The Gatwick Express service to London Victoria takes passengers to the heart of London within 30 minutes, and there are also other direct rail services to London King's Cross, London Bridge and London St Pancras.

5.2.30

The airport is well connected to the wider South East, including Brighton and other coastal towns and cities. Gatwick has a good bus and coach network connecting the airport to much of the UK.

5.2.31

Every year, over 30 million passengers travel to and from Gatwick Airport (excluding transfer passengers) and around 10 million journeys are made by staff working on the airport site. Add the number of journeys by suppliers and service providers, and the scale of demand for surface access to the airport is very large. Surface transport facilities within the airport boundary comprise on-airport roads, car parks and facilities for coaches, taxis and car rental companies which, together, occupy 145 ha of airport land, around half of which are car parks.

5.2.32

Long stay car parking is less than that required to meet current levels of total parking demand because capacity also exists in a number of off-airport car parks run by specialist operators and at many hotels. In addition, there are several unauthorised car parks operating in the vicinity of Gatwick which the local planning authorities seek to close. The latest survey carried out by Crawley Borough Council¹¹ found around 5,800 of these unauthorised spaces. *Figure 5.2* shows the current parking provision on-airport.

5.2.33

Figure 4.13 showed that the current demand for airport car parking is 30,000 spaces. However these demand forecasts do not take account of approximately 1,900 spaces needed to service drop-off/pick-up ('kiss and fly') parking and commuter parking. Therefore the net surplus is currently around 1,900 spaces.

5.2.34

This land use category also includes car rental pick-up, drop-off and valet facilities, waiting areas for taxis and coaches, the main bus and coach stations serving both terminals, and the terminal forecourt road systems.

LANDSCAPING AND SURFACE WATER DRAINAGE

5.2.35


Gatwick includes approximately 132 ha of land devoted to landscaping (both natural and planted), agriculture and surface water drainage.

5.2.36

A zone of natural and man-made landscaping, defining the north-west boundary of the airport, runs between North Terminal and the North West Zone (the triangular area of land bordered by the airfield to the south, the River Mole to the north and west, and the apron to the east). Those living in communities to the north west of the airport see this as an important environmental buffer between them and the airport, providing noise attenuation and visual screening. A further landscaped area lies to the east of the railway.

5.2.37

This land use category also includes a number of balancing ponds and a pollution lagoon east of the railway.

 FIG 5.2
Current public car parking provision

PARKING PRODUCT		Current Spaces
North	Long Stay Parking	12,244
	Holiday Parking	1,800
	Short Stay Parking <i>(including Car Park 6, opened in 2011)</i>	2,138
	Valet North	775
South	Long Stay South	13,366
	Terminal	Short Stay South
	Valet South	670
TOTAL		33,815

5.3

Development principles

5.3.1

To help us safeguard and plan for future infrastructure investments we have established high level principles for the physical development of the airport.

'DELIVER THE BEST PASSENGER EXPERIENCE'

5.3.2

In a competitive market we want to make Gatwick the airport of choice for travellers to and from London. Delivering great service every day is central to achieving our ambition; and improving the experience for passengers is the core purpose of our development programme.

5.3.3

Many of our current projects are designed to support this passenger experience ambition. For example, the new entrance building, the on-going replacement of the concourse flooring, and the creation of a single security search have all improved the experience of passengers using South Terminal. North Terminal passengers have also benefited from the space created by the expansion project and from the new interchange facility .

5.3.4

While we are maintaining and redeveloping the airport there is a risk that this activity will cause disruption to the operation and/or inconvenience to the passengers. A priority for us is to ensure that this risk is minimised through careful planning and design.

'HELP OUR AIRLINES GROW'

5.3.5

One of our key objectives is to ensure that the airport offers current, and new, airlines the right infrastructure to enable them to operate profitably and grow their businesses by, for example:

- optimising the usable capacity of the existing runway while maintaining a punctual and resilient operation;
- looking for process and technology-based solutions wherever possible, but where infrastructure projects are needed, maximising their value by using efficient design and construction solutions;
- configuring the airport to support the introduction of new, more efficient, aircraft types;
- seeking to help airlines reduce their operating costs and achieve punctuality targets;
- and, where possible, accommodating the operations of each airline within a single terminal.

'INCREASE VALUE AND EFFICIENCY'

5.3.6

In addition to providing the capacity to accommodate passenger growth, our development plans must increase the efficient use of our assets, and our investments must be cost effective. We also aim to optimise the use of existing infrastructure to avoid waste and unnecessary investment.

5.3.7

Our strategy is to expand North Terminal so that its capacity broadly matches that of South Terminal. South Terminal is physically constrained, particularly by the railway and the airfield, making its further expansion very difficult.

5.3.8

In order to use the terminal and pier infrastructure as efficiently as possible we want to achieve a mix of different service types to even out the passenger flows over the day as each service type (for example, short-haul to Europe) tends to create a peak period of demand. If a terminal is dominated by a single service type, the pattern of traffic may lead to a low level of utilisation at certain times of the day.

5.3.9

Given that any aircraft maintenance activity carried out on the south side of the airport results in aircraft having to cross the runway to reach the aprons, and that this can be difficult at busy times of the day, the long term plan is for hangars to be located to the north of the runway. However other operational and commercial considerations (e.g. existing ground leases) may mean that this outcome will not be fully achieved for several years.

‘PROTECT AND ENHANCE OUR REPUTATION’

5.3.10

Gatwick must always be able to adapt to changing circumstances and we will consider a range of future scenarios when planning our infrastructure.

5.3.11

We aim to provide the infrastructure needed to support the growth to 40mppa within the existing airport boundary.

5.3.12

We will maintain and, as necessary, replace existing assets so that they support efficient operations and help deliver our service quality and sustainability strategies.

5.3.13

We aim to have the infrastructure needed to provide resilience against causes of operational disruption, for example extreme winter weather.

‘BUILD A STRONG ENVIRONMENT, HEALTH AND SAFETY CULTURE’

5.3.14

Gatwick is committed to operating and developing in a sustainable and safe way. We are driving continuous improvement in our Health, Safety and Environment (HSE) performance which will help us towards achieving our vision of zero HSE incidents. We will also incorporate HSE considerations into the planning, design, construction, fit-out, operation and decommissioning of our activities, facilities, plant and equipment.

‘DEVELOP THE BEST PEOPLE, PROCESSES AND TECHNOLOGY’

5.3.15

We want to provide work spaces of the right quality and in the right location to support the operation, and will explore opportunities to use new technologies to drive efficiency improvements and other benefits. We also want to recruit, and retain, the best people, offering training and development opportunities as part of our Investors in People programme.

5.4

The infrastructure improvements being made today

5.4.1

Gatwick's investment strategy is reviewed annually and is developed in consultation with the airlines as part of the formal regulatory process defined by the CAA. The investment strategy is described in the Capital Investment Plan (CIP) which provides detailed investment plans over the next ten years. The 2011 CIP outlines a total expenditure of nearly £1.2 billion in the current regulatory quinquennium, much of which has already been invested in new infrastructure. £248m was invested in 2011/12 and we will be investing a further £400m over the next two years. This section describes some of the key infrastructure changes being made through this programme.

5.4.2

The primary objectives of this investment plan are to improve service quality standards by enhancing the passenger experience, upgrading the fabric of the airport and increasing terminal and airfield capacity to meet forecast growth.

5.4.3

Many significant projects have been completed in the two and a half years since the change in ownership, including:

- *Extension of North Terminal*

The landside envelope of North Terminal has been extended to the south and east, adding approximately 12,500m² of floor area for additional check-in and arrivals baggage reclaim facilities. This is a key part of our strategy to grow the capacity of North Terminal to handle approximately 20mppa and provide a balanced throughput for both terminals.
- *Creation of a new forecourt and interchange at North Terminal*

The North Terminal forecourt has been redesigned with a drop-off kerbside to the east of the multi-storey car parks. A new interchange building connects the forecourt and shuttle stations to the terminal.
- *Provision of additional security lanes in North Terminal*

Six additional security search lanes have been constructed in order to provide passengers with a faster journey through the terminal.
- *Construction of a new multi-storey car park at North Terminal*

A new short stay car park has been constructed adjacent to North Terminal with a capacity of approximately 1,200 vehicles.
- *Upgrade of the inter-terminal shuttle*

This project saw a major refurbishment of the shuttle guide-way and stations with new shuttle cars and a new operating controls and systems.
- *Bus and Coach facilities*

New bus and coach facilities have been provided at both terminals to expand capacity and improve accessibility.
- *South Terminal forecourt improvements*

This project saw the construction of a new entrance building to South Terminal, improving the accessibility from the forecourt and multi-storey car parks with new lifts and simpler routes in and out of the terminal.

- Creation of a new security search facility in South Terminal*

This project saw the creation of a new centralised security screening position to replace the previous arrangement of separate channels on different levels. This has improved way-finding, improved efficiency and facilitated the introduction of the latest security technology.
- Improvements to South Terminal departure lounge and immigration*

The South Terminal departure lounge has been reconfigured through the relocation the airside/landside boundary. Further improvements are underway (see below). The immigration area refurbishment saw the replacement of the ceilings and an upgrade to the electrical systems.
- Reconfiguration of Pier 2 and associated apron*

This project saw the reconfiguration of stands on the south side of Pier 2 to accommodate the most modern short-haul aircraft. Gate rooms were also enlarged and updated.
- Construction of additional aircraft stands in the North West Zone*

Six new aircraft parking stands have been constructed along with a new balancing pond and environmental bund.

5.4.4

Further projects which are currently underway, or are expected to start within the current regulatory quinquennium include:

NORTH TERMINAL PIER 5

5.4.5

This will see the modification of the existing Pier 5 by creating an additional floor level. This will simplify the segregation of arriving and departing passengers. Along with the reconfiguration of the adjacent apron to accommodate modern long-haul and short-haul aircraft types, this will improve the level of pier service at North Terminal.

NORTH TERMINAL BAGGAGE UPGRADE

5.4.6

Replacement of the North Terminal baggage system within the main baggage hall.

NORTH TERMINAL DEPARTURE LOUNGE

5.4.7

This will see the provision of improved food and beverage facilities for passengers departing from North Terminal.

A380 PIER SERVICE

5.4.8

This project will deliver a single gate on Pier 6 that is capable of serving A380 aircraft. Further A380 gates are envisaged in time (see Chapter 6)

SOUTH TERMINAL LANDSIDE CONCOURSE

5.4.9

This will improve the passenger experience in the landside concourse by replacing the floor tiles.

SOUTH TERMINAL BAGGAGE SYSTEM AND PIER 1 REPLACEMENT

5.4.10

This will see the construction of a new baggage system for South Terminal; increasing capacity and improving efficiency, flexibility and reliability. The project is combined with the replacement of Pier 1, Gatwick's oldest pier. Its replacement will provide a better passenger experience and also enable a more efficient operation on the airfield.

SOUTH TERMINAL DEPARTURE LOUNGE

5.4.11

The departure lounge is being reconfigured to provide a new walk-through duty-free store and future projects will deliver further high-end retail offers and replacement seating.

SOUTH TERMINAL DOMESTIC ARRIVALS

5.4.12

This will see the creation of a new arrivals area for passengers arriving on UK flights. It will simplify wayfinding both for passengers and those meeting them.

RUNWAY RESURFACING

5.4.13

Part of our on-going maintenance programme to maintain and/or upgrade assets. Typically the runway needs to be resurfaced every 10 to 12 years.

CONTRIBUTIONS TO OTHER PROJECTS

5.4.14

We are also contributing to two infrastructure projects managed by other organisations:

- Rail station improvements*
 Gatwick is contributing £7.6m from the Passenger Transport Fund (see Chapter 7) to Network Rail’s £53m project to extend the station concourse, construct a seventh platform and improve the vertical circulation between platforms and concourse. This should add capacity as well as improving the environment for passengers.
- Upper Mole Flood Alleviation Scheme (UMEAS)*
 Gatwick is contributing £4.01m to the Environment Agency’s £15m flood prevention scheme which benefits both the airport and the surrounding area.

ASSET STEWARDSHIP PROJECTS

5.4.15

In addition to the above there are a wide range of projects designed to ensure that our existing assets are maintained in an efficient and economical way.

5.4.16

The above lists are not exhaustive, but give an indication of the scale of improvements that have been completed or are underway or planned. Collectively they will enable Gatwick to handle the predicted growth in passenger numbers while greatly improving the passenger experience and services on offer.

5.4.17

Beyond these developments it is clear to us that further investment will be needed. For example, we expect there will be the need for further capacity-related projects to support the growth to 40mppa. There will also be the need to invest in new infrastructure to replace existing assets where these have reached the end of their design lives or they need upgrading to improve passenger service, energy efficiency or productivity. There will also be the need to invest in infrastructure to meet future standards of environmental performance or to meet new safety and security legislation. Some of these future projects are described in the next chapter.

6

Gatwick in 2020

6.1

Introduction

6.1.1

This section describes how we expect the airport to change between now and 2020. As explained in Chapter 4 our traffic forecasts for 2020 range from 35.9mppa (low case) to 42.4mppa (high case) with a most likely prediction of 39.1mppa (base case). For the purposes of describing Gatwick in 2020 we use a throughput of 40mppa. This sits comfortably within the forecast range and is consistent with the approach adopted in the draft master plan.



6.1.2

While 2020 is quoted, the following description is intended to represent Gatwick at 40mppa regardless of the exact year when this throughput is reached.

6.1.3

Gatwick is currently regulated by the CAA. The current regulatory period, 'Q5', will end on 31 March 2014 and the CAA is considering the form of regulation, if any, after this date. At the request of the CAA, on 1 April 2012 we commenced a process of constructive engagement with our airlines during which we are discussing the improvements needed at Gatwick beyond Q5. Until this dialogue has been concluded, it isn't possible to be specific about the projects that may be included in our future capital programme. However we have published our current ideas in our initial business plan to 2020¹² and from this and other planning studies we can describe in broad terms the kind of developments that we expect.

6.1.4

The expected airport layout in 2020 is shown in [Figures A.7 and A.8](#). [Figure A.7](#) shows how the land use zones may change compared with the current airport. [Figure A.8](#) identifies likely changes in infrastructure.



FIG 6.1

Comparison of land use zones

	AREAS IN HECTARES	
	2011	2020
Airfield	228	229
Terminals	18	18
Aprons	161	160
Cargo	11	11
Maintenance	9	12
Ancillary	33	36
Surface transport	145	145
Landscaping and surface water drainage	132	132
Undeveloped land	22	16
TOTAL	759	759

6.1.5

While we anticipate some infrastructure changes to address future needs, the overall pattern of land use will be largely the same as today, as illustrated in [Figure 6.1](#).

6.1.6

In 2020 Gatwick will still be a single runway, two terminal airport. The general location and arrangement of infrastructure will be as it is today and there are unlikely to be any changes to the boundary.

6.1.7

However, the forecast increase in passengers to 40mppa is likely to drive the requirement for changes to the airport infrastructure. These changes might be needed to ensure that, with growing passenger numbers, we have sufficient processing capacity to deliver our service level targets (e.g. maximum queue times). The changes may be necessary because our service levels need to be improved in the future in order to compete with other airports. They may also be needed to provide entirely new products or services to passengers, to meet their expectations as identified through our insight research described in Chapter 2. Other changes might be needed to deliver against our sustainability targets or to comply with changing security requirements.

6.1.8

We employ expert analysts and use sophisticated tools, for example computer simulation models, to test the infrastructure changes needed to deliver our ambition for Gatwick. This work is on-going but has been used to inform the description that follows. It gives us the confidence that Gatwick will be able to accommodate the growth forecasts presented in this master plan.

6.1.9

The surface access and sustainability aspects of this growth are addressed in Chapters 7, 8 and 9, which also explain the general manner in which we will be seeking to manage and mitigate any adverse effects.

6.2

The airfield

6.2.1

We do not anticipate any material change to the area of the airfield which is determined largely by the existing runway and parallel taxiway system. However, we do envisage some improvements to the airfield infrastructure. These are likely to be around the themes of runway capacity, safety compliance, asset replacement and enabling works for the A380 aircraft.

6.2.2

Subject to the results of discussion with airfield users, the following general changes in airfield infrastructure are possible by 2020:

CAPACITY AND OPERATIONAL EFFICIENCY

6.2.3

We expect that some small increase in the peak hour scheduled capacity of the single runway may be possible while maintaining service levels. We will work with NATS and the airlines to identify what improvements are needed to achieve a throughput of 40mppa.

6.2.4

One potential area for improvement is the reconfiguration of the taxiways leading onto runway 26L (which handles approximately 70% of all departures). A more efficient arrangement could reduce the time taken for pilots to line up aircraft for take-off following ATC clearance and would make the task of re-sequencing aircraft, to make the best use of available runway capacity, easier. This would be done as part of a wider project to improve the operational efficiency of the airfield, reducing delays, fuel burn and engine emissions.

6.2.5

Even if changes of this type are implemented, it is unlikely that the runway scheduling limit would increase by more than one or two movements in the peak hour.

SAFETY COMPLIANCE

6.2.6

Some minor works may be needed to ensure full compliance with airfield design standards as specified by the CAA. For example, the reconfiguration of the 26L entry taxiways mentioned above could also address an existing deficiency in the taxiway configuration.

ASSET REPLACEMENT

6.2.7

Work has now started on the resurfacing of the main runway. As well as renewing the pavement we will take the opportunity to replace and upgrade some of the existing lighting system.

6.2.8

It is very likely that other sections of the airfield taxiway system will also be refurbished over the years leading to 2020. In these cases we will review opportunities to replace associated facilities, for example, lighting and signage at the same time.

A380 ENABLING

6.2.9

Our discussions with airlines indicate that there is a strong likelihood that A380 aircraft will be operating at Gatwick within the next few years. However, in order to accommodate these aircraft, it is necessary to make some changes to the airfield infrastructure, primarily because the A380 has a larger wingspan than any other commercial passenger aircraft, and the safety clearances between taxiways and obstacles are correspondingly larger.

6.2.10

Gatwick's runway is classified as Code E as the main element of the runway pavement is 45m wide. With its 80m wingspan the A380 is classified as Code F and CAA design standards specify a 60m width for a Code F runway. However, the A380 is certificated to operate from 45m wide runways and does so already at many airports worldwide. Therefore we do not anticipate needing to widen the runway for A380 operations.

6.2.11

There are other design standards for Code F aircraft that need to be applied, for example, the width of taxiways and the separation between taxiways and fixed obstacles. While currently Gatwick does not have a full complement of Code F airfield infrastructure, the changes needed to become compliant in this respect are actually quite small.

6.2.12

Our strategy is to make the necessary changes to the airfield configuration and operating procedures, to enable us to accommodate an A380 aircraft by 2013. The principle changes needed are:

- localised widening of some rapid exit taxiways (to be completed as part of the runway rehabilitation project described above);
- creation of a gate on Pier 6 that is able to accommodate the A380;
- and special operating procedures to taxi A380 aircraft through the existing holding area for Runway 26L ('Alpha box')

6.2.13

Beyond these changes, further improvements may be needed to accommodate an increasing number of A380 aircraft over time. These changes might include:

- creation of additional pier served stands for A380s (see 'Aprons and Piers' below);
- reconfiguration of the 'Alpha Box' to provide a Code F taxiway route to Runway 26L;
- and upgrading further sections of taxiway to Code F status.

6.2.14

The timing of the changes above will depend on the speed of introduction of A380 aircraft. They will also need to be co-ordinated with planned pavement refurbishment projects which form part of our asset stewardship programme. We do not expect to make any changes to the runway width by 2020 which will therefore remain technically a Code E runway but one that is capable of safely accommodating A380 operations.

6.3

Passenger terminals

6.3.1

Section 5.4 describes a number of existing Q5 projects to expand and improve our terminals. These projects will collectively transform the capacity and quality of the two terminals. However, beyond these current projects, some further developments will be needed to provide a balanced 20mppa capacity in both terminals. These will also deliver improvements to passenger experience by updating the older areas of the terminals, improving way-finding and generally improving service standards.

6.3.2

The scope of these additional terminal projects will be developed in consultation with the end-users and therefore we cannot provide specific information at this stage. However our analysis suggests that opportunities exist for capacity enhancement and service level improvements in the following areas:

CHECK-IN (BOTH TERMINALS)

6.3.3

Research indicates the need to update check-in in both terminals to reflect new technologies and processes (e.g. self service check-in) and improve the ambience of the check-in concourses to improve overall passenger experience.

NORTH TERMINAL SECURITY

6.3.4

We wish to provide a single, consolidated security screening facility to replicate the new facility in South Terminal. This would also provide space for additional security lanes with the latest screening equipment and provide a less congested area for queuing.

DEPARTURE LOUNGES (BOTH TERMINALS)

6.3.5

Research indicates the need for additional seating and circulation space, improvements in the general ambience and lighting, together with improvements to the retail and catering offers, toilets and other passenger amenities in the departure lounges of both terminals.

NORTH TERMINAL BAGGAGE SYSTEM IMPROVEMENTS

6.3.6

Further improvements to the North Terminal baggage system may be required to support the planned update of the check-in facilities, including the delivery of an early bag store.

ARRIVALS HALL IMPROVEMENTS (BOTH TERMINALS)

6.3.7

This project would see the redevelopment of the arrivals halls in both terminals to improve the quality of way-finding and the overall level of passenger experience and amenities. A particular focus would be the deployment of new technology to reduce queue times for border control checks and to provide better information to passengers.

BAGGAGE RECLAIM (BOTH TERMINALS)

6.3.8

As well as seeking process improvements to speed up the delivery of bags to the reclaim halls, we may need to make modifications to the existing equipment to address anticipated shortfalls in reclaim belt capacity.

6.4

Aprons and piers

PUBLIC TRANSPORT

6.3.9

This would improve the pedestrian access between the terminals and local bus services. As well as improving the passenger experience this will help encourage the use of public transport by passengers and staff, helping us meet our public transport mode share targets.

ASSET REFURBISHMENT AND REPLACEMENT

6.3.10

As part of our on-going asset stewardship programme we will need to refurbish and replace elements of terminal infrastructure to maintain service levels, minimise energy use and meet future operating standards.

TERMINAL EXPANSION

6.3.11

Some further expansion of the terminal building envelopes of both terminals may be needed to deliver the improvements outlined above. Projects that are most likely to generate the need for terminal expansion include the departure lounge extension at North Terminal and the baggage reclaim improvements at South Terminal. Any further expansion that is needed will be subject to the normal planning approval processes outlined in section 3.3. It is worth noting that we do not expect any changes to the overall land area dedicated to passenger terminal use as indicated in [Figure 6.1](#).

6.4.1

Section 5.4 described a number of projects to improve our aprons and piers which are underway, or are expected, to be started before March 2014. These include:

- Pier 1 replacement
- Pier 5 redevelopment
- Airbus A380 gate on Pier 6

6.4.2

In addition to these projects we expect to see some further redevelopment of the aprons and piers by 2020.

6.4.3

The main factor that affects the size of the apron is the demand for aircraft parking stands. This is likely to change over time owing to an increase in both the number and size of parked aircraft. Another issue is the number of pier-served stands, as this will affect our ability to meet pier service standards.

6.4.4

Our forecasts show that the peak number of aircraft parked in 2020 will be approximately 110 compared to 100 in 2010. With the recent opening of six new remote stands in the North West Zone, we expect there to be a sufficient number of stands, in total, to meet the 2020 demand and, therefore, the overall size of the apron area will be largely unchanged.

6.4.5

However, there are likely to be adjustments in the configuration of the aprons owing to changes in the fleet mix and redevelopment of the pier system, as described below.

FLEET MIX CHANGES

6.4.6

We expect there to be some significant changes in the mix of aircraft types. In recent years there has been an increase in the wingspan of aircraft operating on short-haul routes with, for example, the addition of winglets to improve fuel efficiency. Many of our smaller stands are too small to accommodate these modern aircraft. We expect to see a greater proportion of these wider-wingspan short haul aircraft at Gatwick by 2020.

6.4.7

We also expect to see an increase in the number of large wide-body aircraft owing to the forecast growth in long-haul services. For example, Airbus A380s are expected to be operating at Gatwick before 2020.

6.4.8

It is not only long-haul operators contributing to a growth in larger wide-body aircraft. Charter operators are also expected to replace some of their current aircraft with modern types which have larger wingspans, such as the B787.

6.4.9

We expect that these changes in fleet mix will require some reconfiguration of the existing pier-served and remote stands.

PIER REDEVELOPMENT

6.4.10

In 2011 approximately 96% of North Terminal and 98% of South Terminal passengers were provided with pier service. With the expected changes in the volume and size of parked aircraft outlined above, the existing piers will not be able to deliver this level of pier service in the future. North Terminal will be most affected by this change, as this will see the greatest growth in passenger throughput. If no changes are made to the North Terminal pier system we would expect pier service levels there to fall to around 90% by 2020, or possibly lower.

6.4.11

One option for maintaining pier service levels at North Terminal which we are examining is the southern extension of Pier 6 to provide additional pier served stands with flexibility to accommodate either wide-body and narrow-body aircraft. We anticipate that this, or a similar project, will enable North Terminal pier service levels to be at or about 95% in 2020. However, the achieved level of pier service is sensitive to the future size and mix of the aircraft fleet based in North Terminal. We are therefore carrying out further analysis to determine the scope and timing of additional pier-served stands.

6.4.12

In addition to changes in the demand for pier-served stands, there are certain deficiencies in our existing piers that we would like to resolve, to make them more efficient, and to improve the passenger experience.

6.4.13

An example is South Terminal's Pier 3. While arriving and departing passenger flows are segregated, the routes used cross each other, relying on a series of lockable doors to ensure that passengers do not mix. This is very inefficient and can lead to low utilisation of these gates, delays and poor passenger experience. We are exploring options to modify the pier to remove this constraint, possibly by providing an additional floor level.

6.5

Other Infrastructure

CARGO AREA

6.5.1

As noted in Section 4.1, in 2011, Gatwick's airlines carried 88,200 tonnes of air cargo. However, in 2001, the airlines carried 320,000 tonnes. This was processed through the existing cargo sheds, so it can be seen that there is significant spare capacity in this facility. Our forecasts for 2020 show only modest growth in our projected cargo throughput, and therefore we can assume that the existing cargo sheds can continue to provide adequate processing and storage space.

6.5.2

The cargo sheds are owned by a third party on a long term leasehold basis. We anticipate that the leaseholders will attend to the needs of existing and future cargo tenants, and will undertake any appropriate development or redevelopment within the cargo area.

AIRCRAFT MAINTENANCE

6.5.3

Given the scale of activity at Gatwick, provision for aircraft maintenance will remain a vital feature of operations. We must be able to accommodate the routine servicing of aircraft and the unscheduled repair of defects. Gatwick is (and can be expected to remain) the home base for a significant fleet of aircraft. Therefore the master plan must allow for the prospect that several airlines may wish to operate a maintenance base here, or have another locally based airline or contractor look after their interests.

6.5.4

As there is now only a single hangar in the southern maintenance area and a single hangar north of the runway, it is possible that further hangar development will be needed by 2020. While the size of any new hangar will depend on the requirements of the operator, it is clear that with short-haul and domestic operations accounting for more than three quarters of all flights, there is a strong possibility that additional maintenance capacity will be focussed on smaller aircraft types.

6.5.5

Figures A.7 and A.8 indicate one new hangar by 2020 located in the North West Zone, but this is purely illustrative, and the timing of hangar development will be driven by the commercial decisions of the airlines and their maintenance organisations.

6.5.6

The area for new hangars in the North West Zone is shown as far west as possible to avoid the risk of crowding and compromising the ultimate layout of apron and cargo facilities, while maintaining Brockley Wood and the strategic landscaping zone forming the north west boundary of the airport.

6.5.7

For some of our neighbours, particularly those located between Charlwood and Povey Cross, the intended use of this location for aircraft maintenance facilities is undoubtedly the most controversial aspect of our land use planning, primarily because of the potential visual impact of large aircraft hangars. There seems to be little prospect of a hangar, sized to contain the A380 aircraft, being needed before 2020. However, any wide-body aircraft hangar will inevitably be large and it will be important to minimise its visual impact by attention to screening and landscaping. This is a matter that will need to be considered in detail once firm proposals start to emerge.

ANCILLARY ACTIVITIES

6.5.8

Gatwick's growth will be accompanied by some increase in ancillary activities and it is appropriate that we should have land available for business partners. This also aligns with local authority planning policies, which tend to prefer on-airport to off-airport sites as a location for airport-related businesses, although opportunities will undoubtedly still exist for some businesses to choose off-airport sites.

6.5.9

This means that the land area needed for additional ancillary activities within the airport is uncertain. The ancillary areas shown on the 2020 plan largely replicate the current situation. It is possible that other small sites could materialise as a consequence of re-allocations of land designated for surface transport, if such a change is mutually beneficial.

6.5.10

One area that may see the expansion of ancillary uses is the south-side area previously used for aircraft maintenance hangars. It is possible that equipment maintenance, storage, logistics or other ancillary uses may be accommodated here by 2020. Any structures are likely to be temporary or demountable in order to preserve the second runway safeguarding strategy. Figure A.7 indicates a possible expansion of the ancillary zone in this area westwards although the extent of this is purely indicative.

6.5.11

By 2020 we expect to see the development of a new energy centre, or possibly two energy centres, to enable us to generate electricity on site. The system, when operational, will generate both electricity and hot and chilled water used in our heating and cooling systems and may be powered by natural gas as the primary fuel source although no decision has been made on this at the time of publication. This will allow us to reduce our carbon footprint significantly, as well as increasing the operational resilience of the airport by allowing us to be self-sufficient for part of our power usage.

6.5.12

In the near future we will see the conversion of Longbridge House, adjacent to North Terminal, from an office into a hotel.

SURFACE TRANSPORT FACILITIES

6.5.13

To avoid duplication with the next Chapter (Chapter 7 - Surface Access) we do not provide a detailed description here of surface access improvements needed to support 40mppa. Chapter 7 provides more information on the physical changes that we expect to see at the airport which include:

- Further forecourt improvements;
- Improvements to accessibility between the terminals and bus and coach facilities
- Improvements to the rail station
- Increase in on-airport car parking provision
- Improvements to some key road junctions in the vicinity of the airport.

6.5.14

Chapter 7 explains how these improvements fit within our Airport Surface Access Strategy and how they will be supported by our strategies to enhance the wider transport network in the future.

LANDSCAPING AND SURFACE WATER DRAINAGE

6.5.15

The most significant development within this zone is the extension of the existing pollution lagoon on land east of the railway. Apart from this we anticipate the landscaping areas to be managed and improved in line with our environmental strategy described in Chapter 9 and our aerodrome safeguarding requirements outlined in Chapter 3.



7

Surface access



7.1

Improving surface access

7.1.1

Travel to and from the airport is an important part of the passenger experience and we want Gatwick to offer a strong range of service options. We are working collaboratively with Government, local authorities, operators, investment partners and stakeholders to secure the right future investment decisions, with resilient transport solutions, delivered on time and in readiness for growth.

THE GATWICK AREA TRANSPORT FORUM

7.1.2

Our role is to work with a wide range of stakeholders and business partners in order to achieve a co-ordinated approach and common agenda. The main consultative group is the Gatwick Area Transport Forum, set up in 1998 and made up of around 60 representatives from GAL, local authorities, transport providers, airlines, car park operators and other interested parties.

7.1.3

The Forum's remit is to co-ordinate and integrate transport solutions across the Gatwick area and the wider South East region. In so doing, it supports the Local Authorities Local Transport Plan programme.

7.1.4

The Forum normally meets annually and has three main objectives:

- to draw up and agree challenging short and long-term targets to increase the percentage of passengers using public transport;
- to devise strategies to achieve these targets;
- and to oversee the implementation of these strategies.

7.1.5

A smaller steering group meets every quarter to progress topical issues and emerging policy. Members of the steering group are drawn from the following organisations:

- West Sussex County Council
- Surrey County Council
- Kent County Council
- Crawley Borough Council
- Tandridge District Council
- Reigate and Banstead Council
- Highways Agency
- Network Rail
- South London Partnership
- Gatwick Diamond
- Passenger Advisory Group
- Airline Operators Committee
- Metro Bus

In addition, from time to time the steering group appoints task groups, to look at specific issues.

GATWICK AIRPORT SURFACE ACCESS STRATEGY (ASAS)

7.1.6

Gatwick's first Surface Access Strategy, published in 2000, focused on influencing the way passengers and employees travel to and from the airport in order to reduce the growth of road trips. This was in response to Government guidance for airports over 5mppa to have an Airport Transport Forum and a Surface Access Strategy.

7.1.7

The strategy was updated in 2004, and again in 2007. The 2007 Surface Access Strategy aim was: "A strategy focused on building for the future – engaging with our business partners and stakeholders to ensure that our passengers and employees have access to a range of travel options that meet their particular needs".

7.1.8

The strategy is built around three principal objectives:

- reducing the rate of growth of road trips;
- easing congestion;
- and managing on-site emissions.

7.1.9

In 2009, a Surface Access Action Plan was drawn up to cover the activities for 2010-2012. In 2012 a new ASAS will be published and work has already commenced on this which we intend to be published in the autumn of 2012.

7.1.10

We believe that innovation will play an important role in Gatwick's future. Therefore in reviewing our ASAS, we have committed to creating a transformational Strategy which looks beyond the Statutory 5 year period to a twenty year horizon.

7.1.11

Effective and efficient surface access also benefits the local community and can help manage the airport's overall environmental impact.

OUR SURFACE ACCESS COMMITMENTS

7.1.12

Improving access to the airport is an essential part of our overall approach to sustainable growth as well as to our day-to-day operations. Our approach is supported by a robust legal agreement¹³ with our local authorities which covers not only the Airport Surface Access Strategy, but a range of transport related targets. One of the overriding targets set by this agreement is that 40% of non-transfer passengers will be using public transport when the airport's annual throughput reaches 40mppa.

7.1.13

Whilst we have made significant progress on this target, by the time we reach 40mppa a further 4 million passenger per annum will need to use public transport. As part of the 2012 ASAS development we will be reviewing what opportunities exist to deliver this. If there are opportunities which are achievable and can deliver a higher public transport mode share then the Transport Forum Steering Group will review this target.


7.1.14

Figure 7.1 shows the transport mode shares for 2011 as recorded by the CAA. This shows that the total public transport mode share (rail and coach/bus mode shares) is 42% with 33mppa

 FIG 7.1
Transport mode share – Passengers 2011

MODE	USAGE (Percentage)
Rail	35.5
Private Car	42.4
Taxi	13.3
Coach/Bus	6.7
Car rental	1.8
Other	0.3
TOTAL	100

Source: CAA Passenger survey 2011

 FIG 7.2
Gatwick public transport targets

CORRIDOR	PASSENGERS USING PUBLIC TRANSPORT	
	2011 actual	40mppa target
Central London	82.1%	90%
Kent	9.5%	15%
Brighton & Hove	46.1%	50%
Rest of Sussex Coast	29.2%	25%
M3 (Hampshire/Dorset)	29.5%	20%
M4/M40 (Thames Valley and beyond)	29.3%	30%

7.1.15

The 40% public transport mode share target applies to the airport operating at 40mppa. This is supported by five targets (see *Figure 7.2*) for the transport corridors, with the greatest opportunity to make a significant impact on mode share. We are progressing well on these targets and we will review what further opportunities there are as part of the development of our new Airport Surface Access Strategy in 2012.

7.1.16

In addition to the capital investments referred to in Chapter 5, the legal agreement also includes a requirement for us to create a 'ring-fenced' fund (the Passenger Transport Fund), to finance a variety of public transport initiatives. This fund is linked to the number of car parking spaces at Gatwick and amounts to around £1 million annually. It is used to support public transport access improvement projects and initiatives, in particular for rail, coach and local bus services, which will be identified in the Gatwick 2012 ASAS.

7.1.17

Our contribution of £7.6 million from the Passenger Transport Fund to Network Rail's £53 million Gatwick Airport rail station enhancement project underlines the benefits of this scheme and our commitment to improving public transport.

OUR SURFACE ACCESS ACTION PLAN 2009-2012

7.1.18

Supporting our legal agreement with local authorities is our surface access action plan which was published in 2009. This three-year plan details specific actions required to be delivered up to the end of 2012. Many of these actions have been delivered by the airport in partnership with key stakeholders who are members of the Gatwick Area Transport Forum.

7.1.19

Our action plan has four key objectives:

- increasing accessibility; to enable more people to access the airport within an acceptable travel time and make Gatwick the easiest airport to travel to for a larger catchment area;
- increasing choice; to give our passengers a great choice of travel options to and from the airport, including public transport and car parking products;
- increasing public transport mode share of air passengers and staff; to encourage the use of more sustainable modes of travel and to minimise the effects of congestion on the surrounding road network thus reducing carbon emissions;
- and increasing the efficiency of roads and forecourts.

7.1.20

We measure the environmental impact of surface access and publish the airport's carbon footprint annually. It is estimated that around 30% of the airport's total 2010 carbon footprint¹⁴ was attributable to surface access. We also work closely with stakeholders to assess the impact of surface access in terms of congestion and air quality caused by vehicular journeys.

7.1.21

In developing our 2012 ASAS, we will review the objectives of the action plan and incorporate these along with any new objectives, such as sharing the benefits with the local community as well as minimising the impact of the airport on local communities.

7.2

Rail

7.2.1

Gatwick is London's best connected airport by rail. 360 trains a day travel between the airport and the capital, serving over 12.8m passengers annually, more than any other UK airport station and 10% more than in 2009. However we cannot afford to be complacent. Increasing demand means we need to look for improvements to this network as explained below.

ACCESS TO LONDON

7.2.2

Gatwick Express carries around 50% of all rail journeys to and from Gatwick and over 60% of all rail journeys between London and the airport. Rail travel is up to 50% quicker in the peak than car, taxi or bus options to London.

7.2.3

For rail trips to the City of London Business District, Gatwick Express accounts for around 71% of passengers. Rail overall accounts for 97% of City of London business passengers travelling to the Airport

7.2.4

Gatwick Express passengers contribute around 40% more revenue (via premium fares) than commuters. This equates to extra revenue in excess of £27 million per annum, which reduces the subsidy payments and directly contributes to the Government's objective to reduce rail's cost to the taxpayer.

7.2.5

The following services currently operate to and from London:

- Gatwick Express non-stop to Victoria every 15 minutes, journey time 30 minutes. Since 2008 northbound trains departing Gatwick between 0700 and 0900 in the morning and southbound trains leaving London Victoria between 1730 and 1900 have been extended to Brighton. Whilst this has reallocated capacity to improve connections to the South Coast, it has had a detrimental impact on the capacity available for air passengers especially in the morning when the air and commuter market peak simultaneously. Originally a separate rail franchise, Gatwick Express was merged with Southern in 2008.
- Southern Trains to Victoria via East Croydon and Clapham Junction, 4 trains per hour, journey time 30-53 minutes. Trains have a mixed stopping pattern, generally including Horley, Redhill, East Croydon and Clapham Junction with some adding up to a further five intermediate stops.
- Southern Trains additional trains to London Bridge, peak periods only (six arrivals at London Bridge between 0714 and 0906, four arrivals at Gatwick Airport between 1749 and 1919).
- First Capital Connect (FCC) to London Bridge, St. Pancras International and Bedford via the Thameslink cross-London route. This operates 4 trains per hour, journey time 28 minutes to London Bridge providing additional access at Blackfriars and City Thameslink direct to the City.

7.2.6

Although Gatwick is well connected by rail and having a railway station adjacent to the main terminal is a distinct asset, the current service quality, and the impact of future changes to the main commuter line on which it sits, raises issues that must be addressed to secure future growth.

7.2.7

Current issues for commuters and air passengers travelling by rail indicate the need for investment in surface access to Gatwick through long term planning for Gatwick Express and the Brighton Main Line to complement the new Thameslink franchise and committed enhancements. This is integral to promoting the air passenger experience and maintaining business confidence for growth in air travel, and for wider growth in demand for rail travel to be sustained.

THAMESLINK PROGRAMME

7.2.8

The Thameslink upgrade will improve connections to areas north of London with new half hourly services to Cambridge and Peterborough. The number of services to central London will also double. Gatwick will gain the following benefits from Thameslink improvements:

- new rolling stock with more capacity and longer trains;
- consistent peak and off peak service to a transformed London Bridge station;
- good interchange with Underground and Crossrail services at Farringdon;
- and more direct or “one change” access to destinations.

ACCESS TO THE WIDER REGION

7.2.9

The Great Western Route Utilisation Strategy (GW RUS) covers all services on the Great Western Main Line between London and the South West and Wales. The Great Western Franchise has a dispersed pattern of services with a number of key interchanges. For Gatwick Airport the point of connection is at Reading.

7.2.10

There is a requirement for bidders for the new Greater Western Franchise to provide two trains per hour on a standard pattern between Reading and Gatwick Airport, with the potential remodelling at Redhill to facilitate this, enabling through services to operate to Gatwick Airport on a more ordered pattern of service.

7.2.11

The RUS recommends that the second hourly service to Gatwick Airport from the North Downs line should be included as an option in the post Thameslink timetabling work on the Redhill corridor.

7.2.12

The completion of the Reading Station Area Redevelopment will also incorporate a new, grade-separated underpass to the east of Reading station. This will permit the linkage of train services from west of Reading with the Gatwick Airport route, allowing direct services to Oxford for example.

GATWICK RAIL STUDY

7.2.13

In order to take a strategic overview of rail services we commissioned a rail study¹⁵, the outcomes of which were published in March 2012. This study concluded that proposals for further development, as part of a rail surface access strategy, should include:

- As a top priority, plans for sufficient capacity for air passengers to board trains, with their luggage, in the peak. This means addressing the problems of overcrowding on peak Gatwick Express trains from Brighton.
- A plan to balance the benefits for air passengers and commuters when the new Thameslink franchise "acquires" Southern in July 2015.
- Securing replacement, higher quality Gatwick Express rolling stock from the new franchise to improve the passenger experience.
- Using extra capacity on Southern trains to Victoria and via Thameslink to efficiently cater for peak commuter growth to and from Brighton.
- Retaining a non-stop service on Gatwick Express and maximising the value of investment at Gatwick Airport station.
- Use of smart ticketing as a tool for making best use of on-train capacity.
- Develop an investment plan proposal for 2019-2024, that will mitigate key constraints, including Victoria and East Croydon to provide capacity for future growth and enable a significant timetable change to cater for growth in air passenger and commuter numbers.
- Study the business case for new and improved rail services to Kent and the Thames Valley in the context of future franchise requirements and capacity between Redhill and Gatwick Airport. These include doubling the service frequency between Gatwick and Reading and enhancing service frequencies to Kent

7.2.14

Our commitments to help deliver these improvements are to:

- engage with the DfT, Ministers and business on how Gatwick's economic value can be used to demonstrate the importance of growth;
- invite discussion with franchise bidders on opportunities to maximise rail mode share, optimise revenue and minimise subsidies;
- be proactive in supporting an industry plan for enhancing the Brighton Main Line as a win-win for commuter and air passenger growth;
- and continue to liaise with the South East business community and Local Authorities to deliver improved rail surface access in support of sustainable growth.

7.2.15

We will engage with Government and the rail industry to seek the following outcomes:

- include air passenger needs in the specification of the Thameslink franchise and rolling stock assumptions;
- emphasis on high quality surface access in the new draft policy framework for sustainable aviation;
- investment, as part of the Thameslink franchise process, in a premium Gatwick Express rail service;
- engagement on a balanced plan for growth with an industry enhancement plan for the Brighton Main Line;
- and holistic capacity planning exploring options for new east-west rail connections to Gatwick.

SECURING WIDER BENEFITS

7.2.16

The benefits from taking a holistic approach to the Brighton Main Line services and associated rail services into Kent and the Thames Valley include meeting key policy goals and gaining significant wider economic impacts for the South East.

- It will meet the needs of air passengers which is consistent with Government policy on sustainable transport, sustainable aviation and getting best value for the UK rail network. It supports the network strategy outlined in the recently published Command Paper which includes improving those journeys that matter most for economic growth including links to international airports.
- It will support Gatwick’s growth plans thereby helping to maintain and grow the UK’s international competitiveness and the contribution the airport makes to the economy of London and the South East.
- Higher quality trains and passenger experience will help support a premium fare thereby optimising the revenue contribution.
- Improving east-west connectivity and linking towns to business opportunities associated with Gatwick is a priority for the Gatwick Diamond Business Area and communities across West Sussex, East Sussex and Kent, to maintain a low rate of unemployment and provide access to high value jobs.

OTHER ENHANCEMENTS TO THE RAIL NETWORK

7.2.17

As mentioned earlier a £53 million scheme for the Gatwick Airport rail station enhancement was approved in October 2010 and is expected to be delivered by the end of 2013. The first part of the project will see concourse improvements, including more lifts and escalators, giving improved access to platforms, and later the project includes delivery of a seventh platform and a track and signalling upgrade. These works will improve railway capacity, train reliability and passenger experience.

7.2.18

The work on our rail strategy will be developed further within the 2012 ASAS.

7.3

Road network

THE GATWICK ROAD NETWORK

7.3.1

As the UK's second busiest airport, Gatwick is well placed in relation to the national road network. On an average summer day, the number of vehicles entering the airport is 45,000, with a similar number departing. Most of this traffic uses the M23 via Junction 9, which connects to the M25 and rest of the UK network.

7.3.2

There are three main entry/exit points to the airport, the two roundabouts off the M23 link road that provide access to the South and North Terminals and the A23 Gatwick Road Beehive roundabout. These roads and access points are managed by the Highways Agency (M23) and West Sussex County Council (Beehive roundabout). In addition there is a further controlled-access barrier at Povey Cross Bridge. The A23 Longbridge Roundabout to the north of the airport, managed by Surrey County Council, is also a critical junction for local traffic to and from Redhill, Reigate and Horley.

7.3.3

Gatwick Airport is a traffic authority for a number of roads in and around the airport and maintains its roads as such. Gatwick's internal road network distributes traffic to and from the forecourts, car parks and on-airport hotels. Good traffic management, coupled with forward planning to cope with new airport developments and passenger growth, are essential to avoid vehicle queues. Gatwick has developed a CONTRAM (Continuous Traffic Assignment Model) to identify solutions to current and future traffic scenarios, including the impact of new developments and traffic management schemes.

7.3.4

Due to the proximity of a number of Highway Authorities we work closely with both the Government and the Highways Agency to ensure that Gatwick's closest strategic highways network, principally the M23 and M25, is managed, maintained and improved to reduce congestion and provide for growth.

7.3.5

Locally we work with West Sussex County Council and Surrey County Council who are the other adjoining Highway Authorities.

ROAD ACCESS AT 40MPPA

7.3.6

The road networks will need to accommodate the increased passenger demand for travel to, and from, Gatwick Airport when it is operating at a throughput of 40mppa, coupled with an increase in general non-airport related journeys.

7.3.7

An assessment of the airport road system capacity was carried out to support the 2009 North Terminal development projects planning application. This transport assessment was undertaken to understand the capability of the road network to support the operation of the airport at 40mppa, with each terminal handling approximately 20mppa, and it took full account of our Surface Access Strategy commitments.

7.3.8

At the time this transport assessment was undertaken we expected to reach a throughput of 40mppa in 2019. Although our base case forecasts now indicate this throughput will be reached in 2021, we believe that this assessment still provides a reliable indication of the capability of the airport road system to support 40mppa. However, we will review this during the development of our 2012 ASAS. The results of the 2009 assessment are summarised below.

✈ FIG 7.3

Daily traffic for 2008 compared with Gatwick at 40mppa

	2008 <i>Daily Traffic</i>	2008 <i>Daily Traffic%</i>	40MPPA <i>Daily Traffic</i>	40MPPA <i>Daily Traffic%</i>	2008 <i>40mppa Change%</i>
Air Passenger	76,300	49	85,200	50	+12
Staff	19,400	12	16,900	10	-13
Cargo/ Control Post	8,100	5	8,200	5	+2
Non- Airport traffic (<i>i.e. through traffic</i>)	52,000	33	61,000	36	+17
TOTAL	155,700	100	171,300	100	+10

FUTURE DEMAND FOR ROAD TRAVEL

7.3.9

As a result of airport growth, there is expected to be an increased demand for all forms of transport to, and from, the airport. However, the improvements in public transport mode share will reduce the relative impact of growth in airport related vehicular trips.

7.3.10

This traffic assessment work assumes the following key changes:

- for staff there is an increasing public transport mode share and increase in car sharing;
- and non air passenger traffic growth increases in accordance with factors for the local area set out by the DfT using their TEMPRO model.

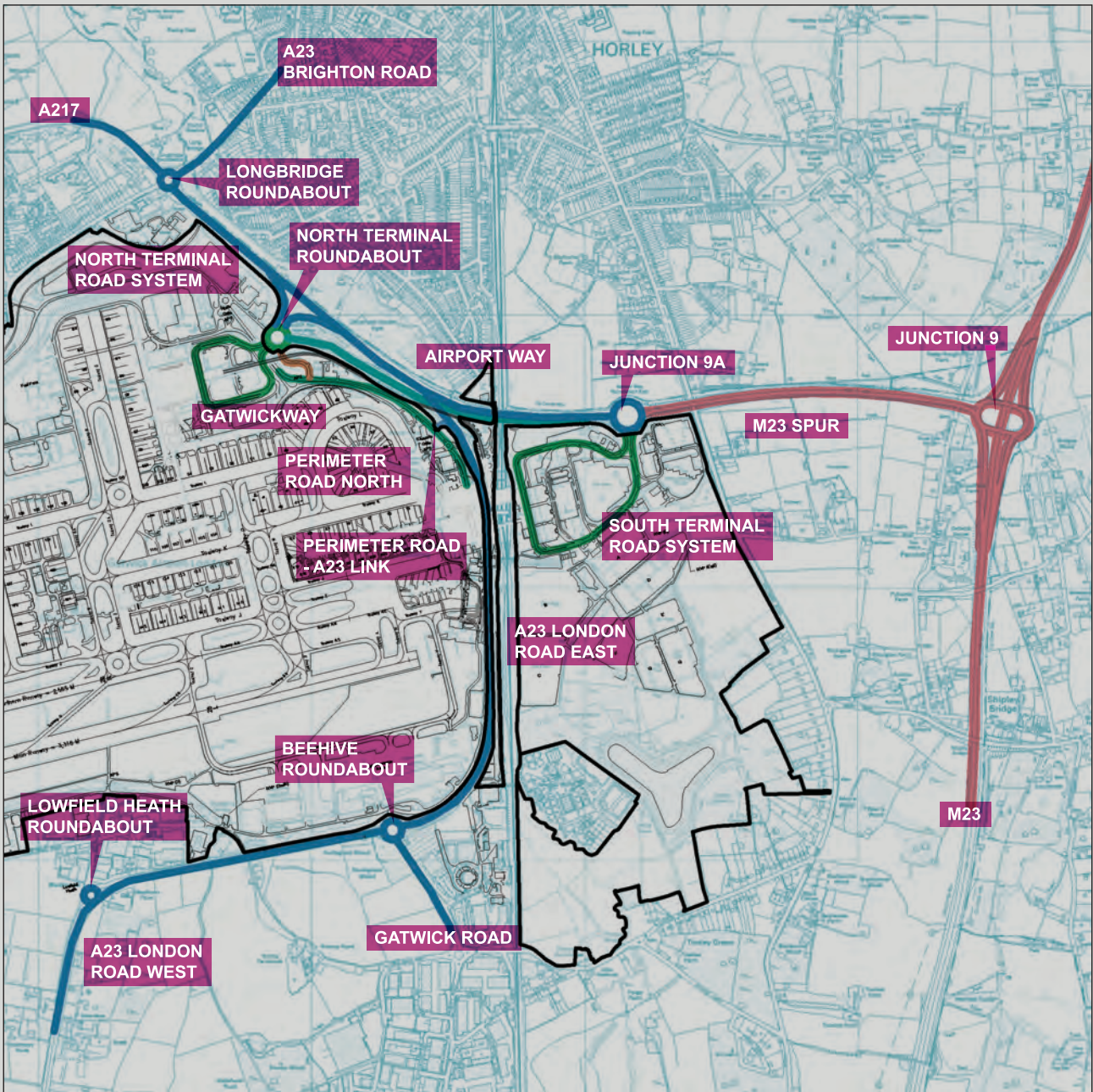
7.3.11

The 2009 transport assessment used road traffic survey data, collected in 2008. *Figure 7.3* illustrates the expected changes in demand for road travel from 2008 to the airport operating with a throughout of 40mppa. It includes airport traffic entering and leaving the locality and non-airport traffic (i.e. through traffic) on the main road network (for example, Airport Way and the A23).

7.3.12

The table shows that daily passenger related traffic volumes rise, staff journeys decrease and that the largest increase is attributable to non-airport traffic. However, total airport related traffic still comprises around two-thirds of the forecast local daily traffic demand.

✈ FIG 7.4
Airport roads in vicinity of Gatwick



ROAD TRAFFIC MODELLING AND JUNCTION CAPACITIES

7.3.13

As part of our 2009 transport assessment, we considered the performance of the highway network in close proximity to the airport. This was conducted principally using the Gatwick Airport CONTRAM highway model, the coverage of which is largely based on the roads identified in *Figure 7.4*. The transport assessment examined the morning and evening peak hours.

7.3.14

Detailed junction capacity and operational assessments were undertaken at the following locations:

- North Terminal Roundabout
- M23 Junction 9A (South Terminal Roundabout)
- M23 Junction 9
- Longbridge Roundabout
- Beehive Roundabout

7.3.15

The assessment shows that:

- improvements to M23 Junction 9 and Longbridge roundabout are not required;
- M23 Junction 9A, the North Terminal Roundabout and the Beehive Roundabout require improvement;
- and the most significant growth in traffic at 40mppa occurs on the approaches to the North Terminal Roundabout.

7.3.16

In addition to an assessment of the capacity of the key junctions, detailed assessments of the general road network were also undertaken. *Figures 7.5* and *7.6* summarise the key changes to traffic flows between 2008 and Gatwick operating at 40mppa for the morning peak (traffic flows relative to capacity are less critical in the evening peak period than the morning peak and, therefore, are not shown).



FIG 7.5

Motorway morning peak hour traffic – Gatwick in 2008 and at 40mppa

TRAFFIC FLOWS FOR THE M23 MOTORWAY, 2008 AND AT 40MPPA (AM PEAK: 0700 TO 0800)		
ROAD NAME	2008 <i>traffic flow</i>	40MPPA <i>traffic flow</i>
M23 North of Junction 9 (Southbound)	1564	1629
M23 North of Junction 9 (Northbound)	1241	1204
M23 Spur Eastbound	1762	1764
M23 Spur Westbound	3010	3010
M23 South of Junction 9 (Southbound)	519	577
M23 South of Junction 9 (Northbound)	1450	1408



FIG 7.6

Other roads morning peak hour traffic – Gatwick in 2008 and at 40mppa

TRAFFIC FLOWS FOR KEY AIRPORT ROUTES, 2008 AND AT 40MPPA (AM PEAK: 0700 TO 0800)		
ROAD NAME	2008 <i>traffic flow</i>	40MPPA <i>traffic flow</i>
Airport Way:		
Airport Way Eastbound	1335	1565
Airport Way Westbound	2014	2218
North Terminal Roundabout:		
Exit from North Terminal	930	1106
Entry to North Terminal	1215	1415
South Terminal Roundabout (Junction 9A):		
Exit from South Terminal	1047	971
Entry to South Terminal	1660	1545
Beehive Roundabout:		
A23 (London Road West) to Crawley	932	1087
A23 (London Road West) from Crawley	913	1045
Gatwick Road Northbound	756	864
Gatwick Road Southbound	567	641
Longbridge Roundabout:		
A23 London Road Northbound	1676	1501
A23 London Road Southbound	1879	1762

7.3.17

Figure 7.5 shows that the predicted changes in traffic flows on the motorway network are generally small with some routes being slightly busier, some the same and some less busy than today. The increased flows are experienced on the M23 southbound, both north and south of Junction 9, where the road is expected to carry 4% and 12% more traffic respectively.

7.3.18

Figure 7.6 shows that the other roads are expected to carry around 10% to 20% more traffic except for the roads to/from South Terminal and for the A23 at Longbridge Roundabout, which both experience a 5% to 10% reduction.

7.3.19

The conclusion reached from this analysis was that the existing road link capacities would be adequate, but that there would be a requirement to enhance some of the key road junctions before 2020.

PROPOSED ENHANCEMENTS TO ROAD JUNCTIONS

M23 Junction 9A

7.3.20

There is a proposed Highways Agency (HA) improvement scheme which includes full signalisation. A further scheme proposed by the HA would provide a dedicated left turn for eastbound traffic from Airport Way to M23 Junction 9, which would further increase the capacity of this roundabout.

North Terminal Roundabout

7.3.21

The agreed improvement consists of permanently closing the Gatwick Way entry in order to provide a free running slip lane from Airport Way into the North Terminal. This has initially been implemented as a temporary scheme and, because the new layout is a success, a permanent arrangement is planned. Subsequently, dependent on traffic growth, it may be necessary to implement an additional scheme for the partial signalisation of the roundabout at the Airport Way and North Terminal approaches to the circulating carriageway. This will be reviewed as part of the 2012 ASAS.

Beehive Roundabout

7.3.22

Modelling of the Beehive Roundabout indicates that traffic growth causes the roundabout approaches to suffer from significant queuing and delays. Full signalisation of the roundabout is the recommended solution to this. It is estimated that over 60% of the traffic using this roundabout at present is non-airport related.

7.4

Other transport issues

BUS AND COACH

7.4.1

We aim to provide excellent facilities at the airport for those travelling to Gatwick, by bus or coach, in order to encourage people to choose these public transport modes. As we look to the future this will be a key priority to address in the development of our 2012 ASAS.

7.4.2

From 2009 to 2011 we invested £7 million on new bus and coach interchange facilities (including waiting areas) at the airport along with significant changes to forecourt management so that bus and coaches have priority access lanes. This was part of much larger forecourt enhancement projects.

7.4.3

We also plan to take appropriate measures to accommodate the expansion of coach services from Gatwick. This will involve an assessment of existing capacity to maximise the efficiency of our current space and may involve further reconfiguration of our forecourts, and other measures, to reduce the potential for congestion caused by unauthorised forecourt use.

7.4.4

Gatwick has a good network of bus and coach services and although, for several years, there has been a gradual decline in their mode share, most recently we have seen initial signs of positive growth. This is likely to be due to the improved quality of the vehicles now being used by transport operators and the improvements we have made to the bus and coach infrastructure at Gatwick.

7.4.5

The Transport Forum Steering Group will work with operators to identify what improvements can be delivered.

Coach services

7.4.6

A number of new services have been introduced such as the National Express route from Bournemouth to the airport as well as London Services by both National Express and easyBus.

7.4.7

In order to stimulate this growth further, our 2012 ASAS will review the opportunities for new services and enhancements to existing services which are commercially viable in the future years. We would expect London services to be commercially viable, whilst regional services may need some support. For Regional services where there is a good business case the airport may consider providing financial support for new or enhanced services.

Local bus services

7.4.8

We recognise the importance of local bus services, in particular for staff access, and the 'Fastway' guided local bus is central to our staff public transport offer. Since 2000, Gatwick has invested £6 million in local bus services and infrastructure. This includes revenue support for Fastway services. The services run along 24km of route network with extensive bus priority, including stretches of innovative guideways that allow the buses to by-pass congestion hotspots. Fastway has proved very successful since its introduction in 2003. Many of the passengers are airport employees, well over a third of whom live in Crawley and Horley. As part of our 2012 ASAS we will be reviewing the access arrangements between the bus stops and the terminals with a view to improving the ease of access, signage and the provision of real-time traffic information.

CYCLING AND PEDESTRIAN ACCESS

7.4.9

Gatwick is in close proximity to the residential areas of Crawley and Horley. There is a designated cycling and walking route serving the towns, forming part of National Cycling Route 21 (London to Brighton), which offers a safe and sustainable travel option, particularly for airport-based staff. We encourage cycling and walking to the airport and there is evidence of an increase in the number of staff cycling to work. Over the next three years, we will be increasing cycle parking sites and facilities, at both terminals, and in 2011 we launched a new 'cycle to work' scheme .

HELPING STAFF ACCESS THE AIRPORT

7.4.10

Our 'Gatwick Commuter' travel scheme encourages the use of public transport, car sharing, cycling and walking for airport-based staff. The scheme offers information on alternative travel options including discounted public transport tickets and our new 'cycle to work' scheme.

7.4.11

In 2013, we will review our Airport Staff Travel Plan. This will include all aspects of staff travel including the role of personalised travel plans, cycling and walking facilities.

7.4.12

In agreement with the Gatwick Area Transport Forum (steering group) during 2010, our local bus target for staff was revised to a public transport target and increased from 20% by bus to 40% over all public transport, specifically:

- 40% of airport staff living in Crawley/Horley to use public transport for travel to work (currently 34%);
- 45% of airport staff living in Croydon, Bromley and Merton to use public transport for travel to work (currently 37%);
- and 30% of airport staff living in Brighton and on the Sussex Coast to use alternatives to private car for travel to work (currently 22%).

7.4.13

We will review these targets in 2013 as part of the development of our Airport Staff Travel Plan. Where staff are unable to use public transport for their airport journey we encourage car sharing, cycling and walking. These approaches are promoted by the 'Gatwick Commuter' for staff living locally.

CAR PARKING

7.4.14

Car parking is an essential function of the airport operation with around 22% of passengers accessing the airport by a private car, which is parked here. However, while the forecast growth in passengers will increase, the demand for parking spaces, peak spreading and a greater use of public transport should result in a gradual decrease in the passenger/parking space ratio.

7.4.15

While the core of our surface access strategy is to support the increase in public transport mode share, an attractive long stay parking offer is shown to be successful in reducing the proportion of passengers being dropped off, thereby reducing the volume of road trips to, and from, Gatwick.

7.4.16

Through our car park strategy, we have an agreed approach with local authorities for the development of on-airport spaces. This will deter the need for off-airport car parking provision and protect the surrounding countryside from further development and unauthorised off-airport car parking operations. The Airport's Car Parking Strategy is being reviewed in 2012 to ensure this objective is supported; The Car Parking Strategy will also support the development of the 2012 ASAS.

7.4.17

From a master planning perspective, public parking capacity may be divided into two primary categories: short stay and long stay parking. Short stay parking is typically used by meeters and greeters and people travelling on high value trips such as business. As such, short stay parking should be located within close walking distance to the terminal building. Long stay parking is for a day or more, and the demand may be met by a variety of parking products, such as valet parking, or remote parking requiring a shuttle-bus connection to the terminal.

7.4.18

There is, however, an increasing demand for long stay parking within short stay car parks, particularly during periods of inclement weather. This is a trend that is expected to continue and one that our car park development strategies need to take into account.

7.4.19

Section 4.2 provides details of our car park forecasts at an airport throughput of 40mppa. In summary, the public parking demand is predicted to be:

- approximately 27,900 long stay spaces, with 14,100 spaces at the North Terminal and 13,800 spaces at the South Terminal;
- approximately 2,000 short-stay spaces at North Terminal and 2,600 short-stay spaces South Terminal (not including valet parking, commuter parking, drop-off/pick-up parking or long term parking in short stay car parks);
- and, including valet parking, this gives a demand for approximately 34,700 public parking spaces.

7.4.20

To this demand needs to be added the spaces needed for commuter parking and drop-off/pick-up, which are categories excluded from the ICF SH&E forecasts. We assess the demand for these to be equivalent to 1,900 spaces taking the overall requirement up to 36,600 spaces.

7.4.21

By comparing these forecasts with our current provision (see Figure 5.2) we predict a shortfall of spaces. The size of the shortfall depends on how well excess demand for one parking product (for example, long stay) can be met by spare capacity within a different parking product (for example, short stay). While there is evidence that this re-allocation can take place with the right pricing strategy, we judge that there will still be a net shortfall of around 2,800 spaces in 2020 (future demand of 36,600 less current supply of 33,800). In addition, it is prudent to plan for the enforced closure of at least some unauthorised off-airport car parking by the local planning authorities. Taking this into account, we plan to provide around 6,000 additional public parking spaces by 2020. We believe this additional provision will support the Airport's Surface Access Strategy by reducing the amount of meeter and greeter round trips that would otherwise be generated.

7.4.22

These additional spaces are expected to be provided by a mixture of decking and multi-storey car park construction on the site of existing surface car parks. More detailed planning work will need to be undertaken to establish the optimal location for these new car parks and one consideration will be the need to minimise the visual impact of any new structures or lighting masts.

7.4.23

The airport-managed staff parking currently provides 7,000 spaces. As part of our Car Parking Strategy review in 2012 we will be reviewing the forecast demand which will determine whether additional spaces are needed to support a throughput of 40mppa.

FORECOURTS

7.4.24

We have completely remodelled our forecourts in recent years, partly to deliver service improvements and partly to comply with DfT security standards. For North Terminal a new forecourt has been constructed between the multi-storey car parks and the hotels. This provides a drop-off area for the public to use (e.g. those in private cars or private-hire taxis). For South Terminal a new forecourt has been provided beneath the short-stay car parks. Provision for drivers to pick up arriving passengers is provided in designated short-stay car parks.

7.4.25

We are currently reviewing our external signage strategy and have installed a dedicated PRM drop off area at South Terminal. However as part of our 2012 ASAS we will be considering further improvements that can be made to the forecourts. We will be reviewing the provision of smoking facilities, signage, forecourt management arrangements and other passenger service related improvements. While our aim is always to encourage the use of public transport we recognise the needs of those accessing the airport by private car.



8

Social and economic considerations



8.1

Employment

GATWICK'S EMPLOYMENT

8.1.1

Gatwick is a major employer in the South East. Gatwick Airport Limited itself directly employs 2,500 people across the airport. Our most recent employment survey (2012) recorded around 21,000 total on-airport jobs. These jobs are diverse in terms of skills and abilities, providing opportunities for all. Gatwick's diversity is reflected in the average remuneration for airport staff which currently stands at £24,300 which is close to the average earnings for London and the South East (£25,800)¹⁶. In addition, there are thousands more jobs in the local area providing support services. As the airport grows we want to do more, and are working on a number of levels to achieve this.

✈ FIG 8.1

Gatwick airport passengers and direct on-airport employment 1992–2012

YEAR	EMPLOYMENT (Direct on-airport)	PASSENGERS (mppa)	PASSENGERS PER EMPLOYEE
1992	19,600	19.8	1,010
1997	25,600	26.8	1,050
2003	24,600	29.9	1,220
2008	22,700	34.2	1,510
2012	21,000	33.8	1,610

Note: all data rounded

✈ FIG 8.2

Employment generated by Gatwick in 2012

EMPLOYMENT TYPE	EMPLOYMENT
Direct on-airport	21,000*
Direct off- airport	2,200
Indirect	2,900
Induced	15,600
TOTAL	41,700

Source: *GAL employment survey. All other data from Optimal Economics, May 2012 (numbers rounded)

8.1.2

Figure 8.1 shows how Gatwick employment has changed between 1992 and 2012. During this period there have been some significant changes, including the volume of passengers, the types of airline services, the level of aircraft maintenance activity and the nature of the security processes. Overall employee productivity has substantially increased over the same period.

8.1.3

The 2012 Gatwick employment survey showed that 35% of airport employees live in Crawley, 11% in Reigate and Banstead, 8% in Mid Sussex and 6% in both Horsham and Brighton. Many of the jobs at the airport are based on shift working and these tend to be most suitable for those living near the airport. For example our recruitment campaigns for security staff focus on local advertising and recruitment.

8.1.4

We define airport related employment using four categories:

- direct on-airport – people whose jobs are entirely related to the operation of the airport and whose jobs are based within the airport boundary;
- direct off-airport employment – as above, but for people whose jobs are located outside the airport boundary, e.g. certain hotels, car parks and freight companies;
- indirect employment – people employed in firms in the South East and London supplying goods and services to the airport or to businesses at the airport;
- and induced employment – employment created by the spending, in the South East and London, of people employed directly or indirectly by the airport.

8.1.5

Figure 8.2 shows our estimates of Gatwick employment for each of the categories above. Direct on-airport employment figures are derived from the 2012 employment survey. Estimates of the other employment categories have been produced by Optimal Economics¹⁷. The key aspects of their methodology are set out below.

8.1.6

Direct off-airport employment was estimated from a 2009 telephone survey of local, off-airport companies who are wholly or largely engaged in airport related activities. Indirect employment was estimated from a separate 2009 telephone survey of airport businesses to determine the type and level of purchases made in the London and South East. An estimate of employment generated from these purchases was then made. Finally, and in line with standard practice, a multiplier¹⁸ was used to derive induced employment numbers from total direct and indirect employees.

FUTURE EMPLOYMENT

8.1.7

Figure 8.3 provides an estimate of employment at Gatwick when the airport is operating with a throughput of 40mppa. For the purpose of the calculations this throughput is assumed to be reached in 2021/22, in accordance with the ICF SH&E base case forecasts.

8.1.8

Direct on-airport employment was forecast by ICF SH&E. This was produced by splitting the base employment data into different functional groups and growing each, relative to traffic growth, at rates indicated by historic trends or based on experience at other airports. Appropriate productivity assumptions were then applied to each group to provide an overall total.

8.1.9

The other employment categories were forecast by Optimal Economics. The direct off-airport and indirect employment categories were forecast by growing the 2012 totals in line with forecast passenger growth with an allowance for productivity growth, based on historic long term average annual rates. As with the 2012 baseline, induced employment was calculated by applying a multiplier of 1.6 to the other categories.

8.1.10

The assessment shows that Gatwick growing to a throughput of 40mppa over the next ten years might be expected to generate an additional 1,700 jobs in the regions of London and the South East, of which 1,200 would be based at the airport.

 FIG 8.3
Employment generated by Gatwick at 40mppa

EMPLOYMENT TYPE	EMPLOYMENT
Direct on-airport	22,200*
Direct off- airport	2,100
Indirect	2,800
Induced	16,300
TOTAL	43,400

Source: *ICF SH&E. All other data from Optimal Economics, May 2012 (numbers rounded)

8.2

Gatwick's economic contribution

AVIATION'S CONTRIBUTION TO THE UK ECONOMY

8.2.1

The aviation sector directly accounts for £53 billion (3.8%) of UK GDP. Of this, £24 billion is generated directly through the activity of airlines, airports and ground services and the aerospace sector, £16.6 billion is accounted for through the aviation supply chain and £12.8 billion through the spending of employees of the sector and its supply chain. An additional £25.4 billion is provided through 'catalytic' benefits through tourism¹⁹, only possible through the air links that aviation provides.

GATWICK'S CONTRIBUTION

8.2.2

Being the UK's second largest international gateway and a major economic hub, Gatwick accounts for a significant portion of this overall contribution. The airport has a crucial role to play in stimulating economic growth, boosting productivity, promoting international competitiveness and encouraging inward investment. Locally, this means retaining and increasing the number of private sector jobs our operations generate, and enhancing our local leadership at the heart of communities and neighbourhoods.



FIG 8.4

GVA generated by Gatwick in 2012

EMPLOYMENT TYPE	GVA (£M)
Direct on-airport	823
Direct off- airport	91
Indirect	164
Induced	895
TOTAL	1,972

Source: *Optimal Economics*, May 2012

8.2.3

In examining economic benefits, it is worth considering the scale and characteristics of Gatwick.

- In 2011 Gatwick ranked as the second largest airport in the UK, in terms of passenger numbers, and the airport accounted for 15.1% of all passengers terminating at UK airports.
- Despite the continuing weak economic climate, in 2011 Gatwick grew by 7.3% on 2010 traffic which was faster than Heathrow (+6.5%) and Manchester Airport (+6.5%) and UK airports overall (+4.1%).

8.2.4

In 2011, 5.5 million Gatwick passengers were travelling for business purposes. This exceeds the total annual passenger numbers of a number of substantial UK regional airports, e.g. Liverpool, East Midlands, Newcastle and Belfast International. Income statistics show that Gatwick is particularly attractive to lower income business passengers. Given the geographic location, business passengers are particularly drawn from the local authority areas of London, Surrey, Kent, West and East Sussex, and Brighton.

8.2.5

Optimal Economics has quantified the economic contribution made today by Gatwick to the London and South East region²⁰. This has been measured in terms of the gross value added (GVA). GVA is the measure of the economic value of the goods and services produced by an industry or business. It is equivalent to the sum of wages, salaries and profits generated.

8.2.6

The GVA was calculated for each of the employment categories described in Section 8.1. The results are shown in [Figure 8.4](#).

8.2.7

GVA for direct on-airport employment has been derived by taking the average Gatwick salary from the 2012 employment survey (£24,300) and grossing this up based on latest ONS regional data showing that wages and salaries account for 62% of GVA.

8.2.8

GVA for direct off-airport employment has been calculated by applying the average annual salary in London and the South East to the employment estimates and grossing this up by the same ratio. Indirect and induced GVA was calculated by applying ONS data on GVA per person employed in London and South East to the indirect and induced employment estimates.

8.2.9

This work shows that Gatwick contributes around £2billion annually to the economy of London and the South East alone. Suppliers of services to the airport and its associated businesses located outside this region have not been included in the estimates above. Additionally, the airport plays an important role in facilitating tourism, global trade and London’s competitiveness.

 FIG 8.5
GVA generated by Gatwick at 40mppa

EMPLOYMENT TYPE	GVA (£M)
Direct on-airport	868
Direct off- airport	89
Indirect	163
Induced	932
TOTAL	2,051

Source: *Optimal Economics, May 2012*

FUTURE ECONOMIC CONTRIBUTION

8.2.10

Optimal Economics has carried out an assessment of the GVA that Gatwick would contribute to the London and South East Region, when operating at 40mppa. This was done following the same approach as outlined for 2012 but applied to the 40mppa employment forecasts. The results are shown in *Figure 8.5*.

8.2.11

As a result, we are able to estimate that if Gatwick were to achieve 40mppa, the airport would contribute in the region of £2.05 billion of GVA to London and the South East each year. This represents about 0.4% of total GVA for the London and the South East. This amount does not take into account the indirect benefits that accrue to businesses from their use of the airport, or the substantial direct contribution that activities associated with our operations make to the Exchequer.

8.2.12

London and the South East are key drivers for the UK economy, accounting for over one third of the UK GVA, and have relatively high productivity per employee. Industries classified as air-intensive in terms of their reliance on air travel to function effectively (for example, pharmaceuticals and financial services) are central to this contribution. The current Government has stated that the promotion of inward investment and export-led growth is central to its overall economic strategy.

8.2.13

As a major international gateway Gatwick has a central role to play in achieving these goals. We provide one of the key platforms for ensuring that excellent international connections are maintained for London and the UK. Our growth will promote the international connectivity that the UK economy needs in order to grow. Recent studies have suggested that a 10% increase in this connectivity (relative to GDP) will raise the UK’s productivity by a little under 0.5% in the long run²¹.

²² Frontier Economics, *Connecting for growth: the role of Britain's hub airport in economic recovery* (September 2011)

²³ Cushman & Wakefield, *European Cities Monitor*, (2010)

²⁴ *Travel Trends 2010*, Table 1.07

²⁵ UN World Tourism Organisation "Tourism Highlights 2011 Edition"

²⁶ *Travel Trends 2010*, Table 1.07

²⁷ *Travel Trends 2010*, Table 4.07

²⁸ *Travel trends 2010*, table 4.12

²⁹ *Driving Growth, the Economic Value of Outbound Travel*, Spring 2012

8.3

Other economic benefits

8.2.14

Similarly, Gatwick is increasingly playing a role in ensuring that UK's international trade network, and its market for exports, are broadened. New routes are being established to destinations that it was previously impossible to reach directly by air from the UK. It has been shown that UK businesses trade 20 times as much with countries where there are daily flights than with those with less frequent or no direct service²².

8.2.15

There is also substantive evidence to show that the international connectivity afforded by Gatwick, and other UK airports, is a factor in shaping inward investment decisions by foreign direct investors. A recent study showed that 51% of companies thought that international transport links were an important factor in deciding which European country to locate in²³.

GATWICK FACILITATING TOURISM

8.3.1

International tourism is heavily dependent on aviation, with air travel accounting for 72% of visitors²⁴ to the UK. The UK is the sixth²⁵ largest destination in the world in terms of international tourist arrivals and those travelling by air spend £14 billion²⁶ in the UK each year. Of all tourists visiting the UK²⁷, 8% travel through Gatwick, providing economic benefits to the three counties closest to Gatwick – West Sussex, East Sussex and Surrey²⁸.

8.3.2

To help promote the benefits of tourism to the local area, Gatwick has worked in partnership with Tourism South East, West Sussex County Council and Surrey County Council on the creation of a new website 'Around Gatwick'. This is designed to raise the profile of the local area as a destination for day trips, short breaks and longer holidays, particularly for those using Gatwick as a point of entry to the UK.

8.3.3

It is not only inbound tourism that brings economic benefits. In a recent study²⁹ for the Travel Association ABTA, the Centre for Economics and Business Research (Cebr) examined the value to the UK of the outbound travel sector. Its research found that the economic contribution of outbound travel is significant, accounting directly for 1.6% of UK GDP. Their analysis suggests that domestic spend on outbound travel products and services in the UK is almost exactly equal to the spend by UK tourists abroad. In other words, holidaymakers spend as much in the UK on their holiday as they do when they are away.

INVESTING IN INFRASTRUCTURE AND LOCAL SUPPLIERS

8.3.4

We are part-way through our £1 billion investment programme, which is revitalising both the airfield and the passenger facilities, and enabling us to support our airlines' continued growth.

8.3.5

Local companies are encouraged to work with our main construction partners and likewise our policy encourages our main construction partners to look for local subcontractors. Local companies are being invited to participate in the tendering process for goods and services. Currently, 12% of all Gatwick's airports suppliers are located within the 'Gatwick Diamond' area. In 2011, the airport itself spent £61 million on their products and services. Airlines and other on-airport partners spent considerably more.

8.3.6

The Gatwick Diamond 'Meet the Buyer' events programme has successfully developed a strong local supply chain for our own company, as well as the airlines, retailers, caterers, cleaning and engineering companies based at the airport. Through the events we co-host, local businesses have the opportunity to introduce their products and services to buyers from many major organisations based in and around Gatwick. Suppliers are matched to the buyers' purchasing requirements in advance, which saves companies valuable time looking for suitable suppliers. These events have led to local businesses winning over £10 million in new contracts since 2001 and at the June 2011 event, 107 suppliers had meetings with 36 buying organisations³⁰.

LOCAL SKILLS AND TRAINING

8.3.7

Since the Draft master plan was published, we have launched a new apprenticeship scheme for airport security officers which was developed in partnership with Central Sussex College. We also continue to support four year apprenticeships within our engineering team. In addition we encourage the creation of individual work-placements at Gatwick for local universities and colleges. We want to do all we can in this area, and will continue to explore a range of options for expanding this kind of engagement.

NORTH TERMINAL

Gatwick



9

The environment

9.1

Introduction

9.1.1

This chapter considers our environmental strategies and the environmental impacts of the airport's operation at 40mppa. Other aspects of the sustainability agenda have been referred to in Chapter 7 (Surface access) and Chapter 8 (Social and economic considerations).

9.1.2

At Gatwick we place great emphasis on reducing the environmental impacts that result from the airport's operation and we are proud of our recent achievements. In 2010 we secured the Carbon Trust Standard for our approach to carbon management, as well as the international accreditation ISO 14001 for environmental management, making us the largest UK airport to have both accreditations in the same year. In 2011 we also achieved the ACI Carbon Accreditation Scheme.

9.2

Climate change and carbon

9.13

In 2010 we published ‘Decade of Change’ which explains our 10-point plan for operating, developing and growing Gatwick in a sustainable manner. To support this we have rolled out a new strategy implementation plans for the airport which are based on a robust baseline with clear targets and objectives designed to drive the airports environmental performance to 2020. They are supported internally by a team of airport environment partners who are the principal point of contact for ensuring their respective business unit strategy is being delivered in line with the wider targets.

9.14

The following sections address the main environmental topics relevant to Gatwick. For the key issues of air quality, air noise and ground noise, we draw on the environmental assessment work undertaken for the 2009 North Terminal development projects planning application. This assessment was based on our traffic forecasts, at the time, which envisaged Gatwick reaching a throughput of 40mppa in 2019. We now think this level of traffic will be reached two years later but believe the 2009 assessment still provides a reliable indication of the level of impacts that will be experienced around Gatwick at a throughput of 40mppa.

9.15

In December 2008 Gatwick Airport signed an S106 Legal Agreement with Crawley Borough Council and West Sussex County Council. This agreement sets a series of commitments, obligations and actions developed to reduce, mitigate and manage the environmental impacts associated with growing the airport to 40mppa. They are summarised in the document ‘sustainable development, our obligations and commitments’. Our Decade of Change strategy uses our S106 agreement as the foundations for our approach. All other plans and strategies are aligned with our S106 obligations.

BACKGROUND

9.2.1

Gatwick, and the wider UK aviation community, accept that climate change is a reality. We have a responsibility to play our part in reducing its effects, and we are doing all we can to achieve this in conjunction with our industry partners. Our sector is unique in the UK transport industry in having developed robust and proactive sustainability initiatives described below, that are bearing results.

9.2.2

With the emergence of more scientific evidence over the last few years, consensus is developing on the respective roles of industries and governments in contributing towards efforts to combat climate change. In January 2009 the previous Government set an ambitious target that carbon emissions from UK aviation in 2050 should be at or below 2005 levels³¹. If this were to be achieved, UK aviation would account for 25% of the emissions allowable if the UK were to meet its broader targets for nationwide carbon footprint reduction. These are a nationwide carbon emissions reduction target of 80% of 1990 carbon levels by 2050, with an interim target of 50% by 2025

9.2.3

During 2011 the Government published its response to the Committee on Climate Change report on aviation growth that is compatible with climate change targets. The response outlines a range of policy options that could deliver the “technical abatement” measures that the Committee on Climate Change identified might lead to a reduction in aviation emissions. These policy measures will be assessed further in the course of the Sustainable Aviation Policy Framework process. It also notes that the current Government still needs “to decide whether to adopt the 2050 aviation CO2 target” outlined in the paragraph above.

9.2.4

More broadly, international aviation emissions are not currently included within the scope of the overall target of an 80% reduction in all carbon emissions, compared with 1990 levels, that is required by the Climate Change Act (2008). However, the legislation obliges the Government to include these emissions when assessing progress towards its legally binding target before the end of December 2012, or to explain to Parliament why this has not been done.

9.2.5

In April 2012 the Committee on Climate Change (CCC) published advice to the Secretary of State which outlined that “there is no longer any reason to account for aviation’s emissions differently to those from other sectors” and that they should be included as part of the accounting framework for the UK’s legally binding carbon budget. They recommended the UK’s carbon budgets for 2013–2027 should be increased accordingly.

9.2.6

While Gatwick is one, albeit important, element in the overall UK effort to combat climate change, we are also part of a wider global effort on the part of the whole aviation value chain. Over the past few decades demand for air travel has grown significantly. Air travel makes up 1.6%³² of worldwide carbon emissions and this could reach 3% by 2050³³ as the trend for increased travel continues.

9.2.7

Momentum has now built behind the industry’s efforts to reduce carbon emissions. These efforts include collaboration between airports, airlines, transport services, local communities and governments (national and international). While significant progress has been made, we believe more can be achieved by all parties involved and we recognise the role we can play in contributing to the wider industry effort to decarbonise aviation. For example, we participate in the Sustainable Aviation group (a collaborative group of airports, airlines, manufactures and air traffic control companies) which encourages innovation, sets targets and monitors progress.

9.2.8

In February 2012 Sustainable Aviation published its second ‘Carbon Roadmap’³⁴. This outlined that through a combination of technical and operational improvements and fuel technology, net carbon emissions from UK Aviation can fall to 2005 levels by 2050 in the context of expected growth in air travel. This is without the projected fall in emissions that may occur following the introduction of the EU Emissions Trading Scheme (EU ETS), which is referred to in more detail below.

9.2.9

In Europe, the overall approach to reducing emissions has focussed on promoting the use of carbon trading, with emitters ‘buying’ tradable allowances for carbon. In January 2012 the aviation sector was brought into the European Emissions Trading Scheme (EU ETS), a carbon trading system in which many other carbon emitting industries are already included. This is a positive development, although most commentators, as well as the UK Government, agree that a truly global carbon trading mechanism would be far more likely to lead to substantive reductions.

9.2.10

Gatwick is required to report our climate change risk assessments and our climate change adaptation plans under the Climate Change Act. In 2011 The Department for Environment, Food and Rural Affairs (DEFRA) approved Gatwick’s Climate Change Adaptation Plan as fit for purpose, with no changes required to the draft we submitted.

9.2.11

In addition, we are a mandatory participant in the Carbon Reduction Commitment (CRC) energy efficiency scheme. The 2011 Comprehensive Spending Review introduced changes to this scheme, including the removal of its revenue-recycling element. The Government recently consulted on a range of changes to the administration of the scheme with the aim of simplifying compliance for participants and reducing burdensome administrative costs. It is now likely that large elements of the administrative process associated with compliance will be removed.

9.2.12

While the bulk of the emissions associated with the industry are those emitted during flights, we acknowledge the responsibility we have to reduce the emissions we are directly responsible for (Scope 1 and 2 of the Greenhouse Gas (GHG) Protocol published 2001 - see *Figure 9.1*) and work with airlines and partners to reduce those we can influence, but not directly control (Scope 3 GHG protocol). We are committed to delivering a carbon reduction strategy that supports the Government's targets.

CARBON EMISSIONS TODAY

9.2.13

We calculate, report and publish the findings of our annual carbon footprint and this process is carried out by an independent third party. Our carbon footprint methodology is sector leading and follows the GHG protocols covering all three scopes. The most recent carbon emissions data relates to 2010 and is shown in *Figure 9.2*. 2011 data will be available in summer 2012.

✈ FIG 9.1
Greenhouse Gas protocol carbon foot print scopes



Emissions on-site, or an associated process, from the combustion of fossil fuels, i.e. gas, oil, LPG, refrigerants and company-owned vehicles

Emissions associated with the use of electricity imported from the grid or from a third party supplier of energy in the form of heat or electricity

Emissions as a direct consequence of the use of goods or services provided by the company. Sources include aircraft movements, passenger & staff travel to the airport, airside activities, waste disposal, water, business travel

Entec 2009

✈ FIG 9.2
Gatwick Airport – 2010 carbon foot print

2010 GREEN HOUSE GAS EMISSIONS (TCO ₂ EQ)	
Scope 1	16,499
Scope 2	79,106
Scope 3	625,897
TOTAL	721,502

Figures verified by RSK

³⁵ *Sustainable Aviation Policy Paper, Inter-dependencies between emissions of CO₂, NO_x & Noise from aviation (September 2010)*

³⁶ *All statistics in this paragraph are from the Committee on Climate Change: Meeting the UK Aviation Target – options for reducing emissions to 2050 (December 2009)*

9.2.14

We will continue to measure our carbon footprint annually and view this analysis as a key tool to support the delivery of our carbon reduction strategy to simply measure and communicate our performance.

9.2.15

We recognise the emphasis that the Government has placed on making aviation a more sustainable sector, through its on-going work to develop a new Sustainable Aviation Framework (See Chapter 3). This new policy framework will set out the conditions in which it may be possible for aviation to grow whilst preventing or minimising the environmental impacts. We believe that in parallel with industry efforts, there is a role for Government to financially support the widespread introduction of low carbon substitutes for jet fuels by airlines, as well as the infrastructure that will encourage research and production in the UK.

9.2.16

Combating climate change can have other, unintended, consequences. Whilst the aviation sector may, through various means, be able to make reductions in carbon emissions, these measures could also result in deterioration of noise performance or impact on air quality. This is because operating procedures or technological developments designed to reduce carbon could have negative consequences for noise and other aircraft engine emissions³⁵. Aviation therefore needs to balance international objectives on climate change with more localised impacts such as aircraft noise. It is for the Government to decide where this balance lies.

9.2.17

It is clear to us that, in both the short and long term, aviation will have an increasing capability to reduce its greenhouse gas emissions. The fuel efficiency of new aircraft, built in the next decade, is likely to be 40% greater than those built before 2005 and the introduction of more radical technologies could make new aircraft up to 60% more fuel efficient by 2050. Likewise, more efficient air traffic control and airfield operational procedures could contribute between an additional 6–13% in terms of reduced emissions per flight by 2020, even before the new generation of aircraft start to come on stream³⁶. This progress means that, by 2050, it would be possible to increase the total number of UK air passengers by around 60% compared to 2005 levels, whilst keeping UK aviation's overall emissions at or below 2005 levels. Aviation is playing its part in tackling climate change. We can do more, but there is no doubt that progress is being made.

9.2.18

Over the long term, we support the view of the Committee on Climate Change that any additional emissions that aviation traffic growth at Gatwick generates would be offset by reductions achieved elsewhere, in other sectors, through the EU Emissions Trading Scheme and the technical and operational improvements that the industry is delivering. It is also possible that, in the long term, the right environment for mass take-up of sustainable biofuels by airlines could emerge. This would also substantially reduce the contribution that flights to, and from, Gatwick make to climate change. We are working actively with Government to create the right environment for biofuels to flourish.

OUR STRATEGIES TO REDUCE CARBON IN THE FUTURE

9.2.19

At the airport we are seeking to reduce those carbon emissions for which we are directly responsible through two key initiatives:

- Firstly, as part of our Decade of Change strategy we have set an ambitious target for the reduction of our energy use. This is to have reduced our energy consumption in 2020 by 20% from 2010 levels. The ways in which we are addressing this are covered in section 9.7 below. The reduction in energy use, and the switch to greater use of renewable energy through, for example, the use of photovoltaics, will result in a reduction in our scope 1 and 2 emissions.
- Secondly, as outlined in Chapter 6 we plan to replace some of our old building HVAC plant with one, or two, new energy centres. These will be much more fuel efficient and will further reduce our carbon footprint.

CARBON EMISSIONS AT 40MPPA

9.2.20

Although no formal standards exist for forecasting airport Greenhouse Gas (GHG) emissions, this assessment has been undertaken by RSK Group in accordance with the World Resources Institute (WRI) Greenhouse Gas Protocol and ISO 14064-1 (specification with guidance at the organisational level for quantification and reporting of greenhouse gas emissions and removals).

9.2.21

The assessment is based on the September 2010 GHG conversion factors published by the Department for Environment, Food and Rural Affairs (DEFRA) and the Department for Energy & Climate Change (DECC), except where alternative factors have been agreed. All GHG emissions are expressed in the form of tonnes of CO₂ equivalent (tCO₂eq). The forecast assumes that the airport will have delivered against all the objectives in ‘Decade of Change’.

✈️ FIG 9.3

Carbon footprint at 40mppa

40MPPA GREEN HOUSE GAS EMISSIONS (TCO ₂ EQ)	
Scope 1	37,808
Scope 2	33,001
Scope 3	789,368
TOTAL	860,177

Source: RSK

9.2.22

The DfT has published forecasts of carbon emissions which show 3.8 million tonnes of carbon associated with Gatwick operations in 2010 and 2030³⁷. The difference in scale can be explained by the way in which Scope 3 emissions are measured. Whereas the DfT figure includes all emissions from aircraft flights beginning or ending at Gatwick, our Scope 3 aircraft emissions only allow for the landing and take-off cycle. This is because the carbon associated with the whole aircraft journey from its origin, or to its destination, needs to be considered in the context of the global aviation industry. We believe these aspects are already being addressed through the Government’s sustainable aviation framework, through the EU ETS, through the EU Single European Sky initiatives and other international measures.

9.2.23

It is clear that there are increases and decreases across the three scopes compared to a 2010 foot print year. Scope 1 shows an increase of just over 21,300 tonnes, which is due to bringing online an airport energy centre. However, this increase is more than offset by the decrease in scope 2 emissions. Scope 2 emissions reduce by over 46,000 tonnes due to the operation of this energy centre reducing the amount of electricity the airport draws from the national grid. The introduction of the airport energy centre results in a Scope 1 and 2 net reduction of just under 25,000 tonnes of carbon compared to 2010. The results also confirm an expected 46.5% reduction in Scope 1 and 2 carbon emissions from our 1990 baseline of 132,360 tonnes.

9.2.24

Scope 3 emissions increase due to the predicted increase in aircraft movements, although this increase has been minimised by the forecasted introduction of new generation aircraft that have more efficient engines with lower fuel burn than current wide bodied aircraft.

ADDITIONAL MEASURES TO ADDRESS CARBON

9.2.25

There are other initiatives to address this modelled growth in Scope 3 emissions that are either in progress or planned, but the impact of these is not quantifiable at the moment. One example is the roll out of Airport Collaborative Decision Making (ACDM), a concept that ensures aircraft, ground crews and air traffic controllers work more closely together with shared data to reduce flight delays and time wasted queuing for take-off and waiting for parking stands. This will have a direct impact on fuel burn and carbon emissions. We are also a signatory member of the Airport Operators Association (AOA) low carbon on the ground scheme, which allows us to work with other airports to share knowledge and best practice to minimise Scope 3 emissions.

9.2.26

Eurocontrol, the European organisation for the safety of air navigation, is working towards a new pan-European air traffic management system known as Single European Sky (SES). This has objectives to radically improve the efficiency of air traffic control within Europe, decreasing the complexity of the airspace design and management and enabling more direct routes to be flown between airports. A key benefit of this will be to reduce track-miles flown with a resulting reduction in carbon emissions. In the UK, NATS are supporting this initiative and have consulted on its Future Airspace Strategy (FAS). NATS are working on the redesign of the London control area through its London Airspace Management Programme (LAMP). Once implemented this should bring benefits to airlines using Gatwick, including a reduction in fuel burn.

9.2.27

In 2012 we will be launching a new airport surface access strategy (ASAS) aimed at improving the passenger and staff access to and from the airport. This should support our carbon reduction programme by encouraging passengers and staff to use more sustainable public transport modes and to identify improvements needed to the local road network to reduce congestion and unnecessary fuel use by road vehicles.



9.3

Air quality

BACKGROUND

9.3.1

We have been reporting air quality in the local area for many years, during which time there have been measurable improvements. During 2010 there was a slight increase in recorded emissions in the Horley air quality management area. It is not clear what caused this slight increase but levels are now back to normal levels and are trending flat or slightly downwards. Our goal is to maintain the downward trend. To achieve this we must act on all sources of pollution, forecast local air quality and measure performance. Our legal agreement with the local authorities laid the foundations for growing and developing the airport in a sustainable way, and air quality management is a key part of this agreement.

SOURCES OF AIR POLLUTION

9.3.2

Combustion processes produce emissions of NO₂ and nitric oxide (NO), collectively known as oxides of nitrogen (NO_x). Ground level NO_x emissions at Gatwick are principally emitted by aircraft, with the take-off operation being the largest contributor to those aircraft emissions. Emissions from road vehicles, within the airport and on the surrounding road system, are the second largest source of air pollution. It should be noted that a significant proportion of the road journeys in the vicinity of Gatwick are, in fact, not related to the airport. Other sources of NO_x emissions include boilers and airport fire training.

9.3.3

Air quality targets and permissible pollution levels are set out in the UK National Air Quality Strategy (NAQS) published by DEFRA. The main emissions of concern in the local area are nitrogen dioxide (NO₂) and particulates (PM₁₀, PM_{2.5}). The limit for the concentration of NO₂ is 40 micrograms per m³.

9.3.4

Following the designation of Horley Gardens as an Air Quality Management Area (AQMA) in 2002 we have worked with Reigate and Banstead Borough Council (RBBC) to monitor and manage NO₂ emissions to ensure that air quality limits have not been breached. We will continue to work in partnership with RBBC and other local authorities to reduce the airport's air quality impacts.

9.3.5

Particulates (PM₁₀ and PM_{2.5}) may affect respiratory and cardiovascular conditions. Because of this, the Government has set a series of objectives for atmospheric pollutants. These are set out in the NAQS and are based on the principle that polluting emissions and ambient air must not cause harm to human health and the environment.

9.3.6

We have been continuously monitoring air quality at the airport since 1992. Looking to the future we, and local authorities, have identified NO₂ as the local airport-related emission requiring closest consideration.

AIR QUALITY TODAY

9.3.7

Existing air quality conditions have been established from monitoring data collected in the assessment area by local authorities (CBC, Reigate and Banstead Borough Council and Mole Valley District Council), from data collected in the vicinity of the airport, and from background pollutant concentration data published on behalf of the DEFRA.

9.3.8

Existing air quality in the area close to the airport is generally good. The AQMA in Horley Gardens was designated on the basis of a potential exceedance of the annual mean NO₂ air quality objective. However, at all locations around the boundary, air quality objectives are comfortably achieved.

9.3.9

The NO₂ concentrations for 2005/6 are shown in *Figure A.4*

9.3.10

Recent predictive air quality modelling results for 2015 show clearly that our approach to environmental management at Gatwick is set to deliver results. Gatwick's development plans to 2015 were included in the modelling and within the AQMA, there is no forecast breach in the NO₂ limits as a result of any emissions, including those from the airport.

**OUR STRATEGIES
TO IMPROVE AIR QUALITY IN THE FUTURE**

9.3.11

Our Decade of Change strategy includes the following management actions:

- work with airlines and partners to reduce air quality impacts using new technology, processes and systems;
- develop vehicular low emission zone for Gatwick;
- and understand the impacts of future legislation for Gatwick and plan accordingly

We will deliver these actions by:

- working with Government on new and emerging legislation;
- maintaining a strong relationship with the airport's key local authorities;
- working with business partners to deliver innovative work programmes;
- and engaging with airport employees and passengers to ensure they support our approach.

9.3.12

Further to these our latest Air Quality Management Action Plan includes the following set of actions designed to deliver our decade of change sustainability targets and S106 obligations. At the time of writing, this action plan was going through the final stages of independent audit and review.

- understand fully the air quality impacts of the airport culminating in the production of an emission profile zoning map for Gatwick;
- work with RBBC and business partners to develop a strategy that evaluates local air quality impacts in the context of Horley Gardens AQMA;
- undertake air quality forecasting and modelling relevant to future airport growth – the programme and focus of this activity will be agreed with RBBC via the Air Quality steering group;
- implement a carbon management zone for airside vehicles – a detailed stepped approach to delivery;
- work with NATS to improve ground operations that have a positive impact on local air quality;
- establish a working group with airlines to embrace new technology, incentivise improved fleet mix and investigate new ways of working;
- implement a reporting process to identify reasons for non-compliance with the MDI (operating instruction) detailing FEGP usage;
- maintain on-airport air quality monitoring sites and report on established KPIs;
- and report performance internally through MCR. External data to be agreed with Air Quality Steering Group prior to publication;

9.4

Air noise

AIR QUALITY AT 40MPPA

9.3.13

As part of the 2009 North Terminal development projects planning application, an assessment was carried out on the effects of Gatwick operating at 40mppa on air quality. This assessment took account of emissions of polluting gases and fine particles from:

- aircraft main engines in the landing and take-off flight phases on the ground and up to 1000 metres height;
- aircraft auxiliary power units;
- airside support vehicles and plant;
- road vehicles on airport landside roads and on a specified road network around the airport;
- vehicles in car parks and car rental pounds;
- and airport heating plant and the fire training ground.

9.3.14

The methodology involved the quantification of emissions of NO₂, PM₁₀ and PM_{2.5} at 40mppa. This enabled the absolute values and incremental change in ground-level concentrations of these pollutants, as well as levels of nitrogen deposition to be determined.

9.3.15

These concentrations and deposition rates were then compared with UK and EU air quality standards, and other relevant guideline values for each pollutant, and the magnitude and significance of the changes brought about were assessed.

9.3.16

The assessment focused on quantifying the change in concentrations of NO₂, PM₁₀ and PM_{2.5} at sensitive locations around the airport, and at the locations of existing air quality monitoring stations. The changes in ambient concentrations of NO, NO₂, PM₁₀ and PM_{2.5} were shown by the dispersion modelling to be very small and were therefore considered as not significant. Air quality at 40mppa is also forecast to improve from the current conditions, and to show no exceedances within the AQMA thus meeting the air quality objective for NO₂ for this location. The NO₂ concentrations for Gatwick at 40mppa are shown on [Figure A.9](#).

BACKGROUND

9.4.1

The term air noise refers to noise from aircraft that are airborne or on the runway during the take-off or landing phase. We acknowledge that communities close to Gatwick can be affected by aircraft noise and we strive to minimise this. We therefore have a range of noise management and mitigation measures in place which are described in this section.

THE ROLE OF GOVERNMENT

9.4.2

As Gatwick is a designated airport under Section 78 of the Civil Aviation Act (1982, 2006) this gives the relevant Secretary of State direct responsibility for the control of air noise around Gatwick. This means that all noise restrictions and noise departure limits are set by the Secretary of State. The ways in which the Government influences our approach to noise management are explained below.

EU Environmental Noise Directive

9.4.3

The fundamental approach that Gatwick must take towards airport related noise is shaped by the DfT, which, in turn, is bound by a series of European Directives. Chief among these is the Environmental Noise Directive (END)³⁸. This Directive requires Gatwick to produce a noise action plan covering the period 2010 to 2015 inclusive. Our plan was signed off by the Secretary of State as fit for purpose during 2010 and lists the key initiatives we will use to mitigate and reduce aircraft noise that results from our operations. It replaces our Section 106 interim plan. Our noise action plan demonstrates our commitment to reducing, mitigating and managing noise impacts.

Night Flights

9.4.4

Gatwick is a 24 hour airport with night flights, the number of which is tightly controlled by the DfT. The restrictions cover the night quota period (between 2330 and 0600 local time) and the night quota shoulder period (2300-2329 and 0601-0700 local time). During these times quotas are set for the number of movements based on the noise classification of each aircraft. The quota system allows for a greater number of movements by quieter aircraft or a lesser number of movements by noisier aircraft. The noisiest aircraft (Quota Count 4 and above) are not normally allowed to operate during the night quota period. The limits are set separately for the summer and winter seasons. The administration and enforcement of the quota system is carried out by our Flight Performance Team (see below).

9.4.5

We recognise that night flights cause a disturbance for some communities and we are constantly assessing opportunities to mitigate this impact through our governance and noise working groups. Towards the end of 2012 the Government are planning a public consultation on the next night flying regime and we will play an active role in this process.

Noise Preferential Routes

9.4.6

Departing aircraft are required to follow specific departure paths or Noise Preferential Routes (NPRs). NPRs were designed by the Government in the late 1950's and have not changed since then. They were designed to avoid over-flights of built-up areas.

Operating procedures and restrictions

9.4.7

A range of noise controls relating to aircraft operations at Gatwick are set out in statutory notices and are published in the UK Aeronautical Information Publication (UK AIP)³⁹. These controls provide instructions to pilots using Gatwick and include measures such as avoiding over-flights of built up areas on departure, minimum heights over built-up areas during the arrivals phase and avoiding the use of reverse thrust on landing during night-time operations.

9.4.8

There are also a set of departure noise limits in place at Gatwick, set by the DfT in 2001. During the night quota limit the noise limit is 87 dBA, during the night quota shoulder period the noise limit is 89 dBA and during the daytime the noise limit is 94 dBA. There are no arrivals noise limits. We have the power to fine airlines whose aircraft breach these noise limits.

AONB over-flights

9.4.9

Gatwick is surrounded by many Areas of Outstanding Natural Beauty (AONB) and therefore over-flights are difficult to avoid. With regards to AONB over-flights, the following guidance is provided by the Secretary of State:

The National Parks and Access to the Countryside Act 1949 (which established AONBs and extends to England and Wales only) and planning policy guidance PPG 7 "The Countryside and the Economy" and PPG 24 "Planning and Noise" do not preclude over-flight of National Parks or AONBs, as it is often impractical to do so. Government policy will continue to focus on minimising over-flight of more densely populated areas below 7000ft. However, where it is possible to avoid over-flight of National Parks and AONBs below this altitude without adding to environmental burdens on more densely populated areas, it clearly makes sense to do so.

THE ROLE OF NATS

9.4.10

NATS has overall responsibility for air traffic control in the UK, with the Gatwick based team having responsibility for landings and take-off as well as aircraft taxiing on the ground. In directing the operations NATS follows the operating procedures laid down by DfT and CAA. In carrying out its role, NATS has to consider not just the environmental effects of the aircraft but also deliver a safe and efficient operation.

9.4.11

For departing flights pilots will be directed to follow the appropriate NPR for that flight's destination. Once the aircraft reaches 4,000ft, at any point along the NPR, the aircraft can be vectored by NATS controllers onto a more direct heading for their onward journey. This flexibility allows NATS to ensure that safe separations between aircraft are maintained and can reduce the track miles flown, thereby reducing CO2 emissions.

9.4.12

NPRs do not exist for arriving aircraft. All arriving flights have to be vectored onto the final glide-path which forms a virtual extension of the runway centreline with an angle of approach of 30. The point at which the aircraft joins this glide-path, and the route taken to reach the joining point, depends on a number of factors including the approach direction, the weather and the location of other aircraft in the vicinity. For arriving flights NATS has also to consider the minimum height restrictions specified in the AIP.

Continuous Descent Approach

9.4.13

Continuous Descent Approach (CDA) is a technique for reducing noise impacts caused by extended periods of level flight during the landing phase. Using CDA pilots and ATC work together to ensure a continuous descent rate, reducing the need for changes in thrust settings and maintaining the maximum practical height above ground level.

9.4.14

A voluntary code of practice for CDA has been produced through joint working between airlines, NATS, CAA, DfT and local authorities. Levels of CDA compliance are regularly reported back to GATCOM. The latest figure for 24 hour CDA performance is 90.69%, showing a continuous increase over previous years.

HOW WE MANAGE NOISE

Local Noise Governance

9.4.15

The Airports Act (1986) requires every UK airport to have an independent airport consultative committee. Ours is known as GATCOM and meets on a quarterly basis in a public forum. There are also sub groups that deal with specific technical issues such as noise management. NATMAG is the airports noise and track monitoring advisory group with representatives from NATS, DfT, airlines, GATCOM and Local Authorities. This group also meets quarterly and reports to GATCOM on the environmental performance of each quarter's operations.

The Flight Performance Team

9.4.16

We believe that it is important for us to continue to gain the trust of our stakeholders, and to demonstrate our commitment to best practice in minimising the impacts of aircraft noise on local communities. We devote a significant amount of resource to monitoring and tracking these noise impacts. Our Flight Performance Team (FPT - previously the Flight Evaluation Unit - FEU) provides information to the public, including aircraft noise complaints and noise related enquiries. The FPT also monitors the aircraft noise mitigation measures, as detailed in the AIP and reports to the community, GATCOM and noise consultation groups.

9.4.17

Additionally, the FPT provides information about flight paths and arrival routes, for example, to prospective homebuyers. The FPT has a number of fixed and mobile noise monitors within the local area that are available so that noise data can be analysed and the findings reported.

9.4.18

During 2011 an internal governance review was conducted and this included assessing the effectiveness and perception of the FEU, as the team was then known. In early 2012 we decided to redirect the reporting line for this team to the Head of Corporate Responsibility and use the new name 'Flight Performance Team'. The FPT will now be developed further to ensure it operates beyond best practice and is perceived as a leading example in our industry, through effective communication and engagement practices.

Noise Insulation Scheme

9.4.19

As part of our on-going noise mitigation activities we currently have in place a noise insulation scheme for residential properties affected by noise, within a defined noise boundary. This scheme has been in place since 2007 and is set to run until December 2012. The scheme provides financial subsidies for the installation of double glazing and loft acoustic insulation. The scheme is being reviewed at present to identify improvements and opportunities to better meet the needs of our local communities. This may mean we change the area within which the scheme operates. A new scheme will be implemented in 2013 after a public consultation and will be aimed at aligning future noise mitigation with the development plans outlined in this document.

HOW NOISE IS MEASURED

9.4.20

The DfT publishes annual noise reports relating to Gatwick's operations. These reports provide noise contours, with tables of areas and populations contained within each contour, and are produced by the CAA - Environmental Research and Consultancy Department (ERCD). The noise exposure metric used is 'Leq'. This is the equivalent sound level (in dBA) of aircraft operations over the average summer day. Specifically the Leq contours are calculated from the daily average movements that take place between 0700-2300 local time from 16th June to 15th September inclusive. The contours are plotted in 3 dB steps and are produced by ERCD using the ANCON model. This has been developed over the last 30 years and brings together a range of international best practices. The model makes use of airport characteristics such as flight paths and routes, and observed aircraft noise data measurements, taken at London airports including Gatwick

9.4.21

The Government continues to identify the 57 dBA level as denoting the approximate onset of significant community annoyance. This was determined through the 2002 ANASE study (Attitudes to Noise from Aviation Sources), available on the DfT website.

9.4.22

Additionally, as required by the EU Environmental Noise Directive, DEFRA publishes noise information in the form of Lden contours. These are produced for the average annual day (rather than summer day) and separately show Lday, Levening and Lnight contours, with a composite Lden for the whole day. Currently only a 2006 baseline Lden contour plan is available for Gatwick.

9.4.23

We have seven mobile noise monitors that are rotated around the local community on an annual basis. The positioning of these monitors is discussed through internal governance groups and agreed at our NATMAG meeting. The annual reports when completed are now published on our website. This equipment can be used to measure specific aircraft noise events. They are linked to our noise and track-keeping system, which takes data from ATC radars, allowing noise events to be matched to specific aircraft.

HISTORIC TRENDS IN AIR NOISE AT GATWICK

9.4.24

There is little doubt that aircraft are getting quieter over time owing to improvements in engine and airframe design. *Figure 9.4* shows data on single event noise measurements for different aircraft types published by the European Aviation Safety Agency (EASA).

 FIG 9.4

Noise measurements for different aircraft types.

AIRCRAFT TYPE	First Flight	Take-off noise (EPNdB)	Landing noise (EPNdB)
SHORT-HAUL AIRCRAFT			
BAC1-11	1963	94 - 100	99 - 102
B737-200	1967	91 - 94	96 - 99
A320-200	1987	85 - 91	94 - 96
LARGE TWIN ENGINE AIRCRAFT			
A300	1972	92 - 95	99 - 102
B777-200	1994	90 - 96	97 - 100
B787-800	2009	85 - 88	97
LARGE FOUR ENGINE AIRCRAFT			
B747-100	1969	104	107
B747-400	1988	94 - 100	101 - 103
A380-800	2005	92 - 95	97 - 98

Source: EASA website (data edited as described below for clarity)

9.4.25

The Take-off noise is an average value of the EASA 'Lateral' and 'Flyover' categories ('lateral' is the point where noise is greatest on a line 450m to the side of the initial climb after lift-off, 'flyover' is the point under departure path, 6.5km from start-of-roll). The Landing noise equates to the EASA 'Approach' (2km from landing threshold) category. There are many different values for each aircraft type depending on the specific model, weight, engine type, etc. Therefore a range from the minimum to maximum is presented in the table.

9.4.26

The table includes aircraft types that have operated at Gatwick in the past, operate here today, or are expected to operate here in the future. It is intended to show how, within each aircraft category, there has been a reduction in the volume of noise produced as each new generation of aircraft is introduced. The measurements relate to very specific flight conditions and are meant to show the relative changes in noise rather than the absolute values that would be experienced at Gatwick. It is interesting to note that during equivalent conditions, during take-off and landing, the new 500-600 seat Airbus A380 generates less noise than the old 100 seat BAC 1-11, now out of service, but a regular user of Gatwick in the past. It is also quieter than the B747-400, currently the largest aircraft in service at Gatwick.

9.4.27

Over the past 20 years, the CAA ERCD noise reports show that the number of people affected by noise has fallen considerably as older aircraft have been replaced by newer and quieter models. *Figure 9.5* shows a year by year comparison of the size of the 57dBA contour from 1988 to 2010. While there has been an underlying growth in the number of aircraft movements, the chart shows that the area of the 57dBA contour, and the population within it, has steadily declined. This has been largely due to technological improvements in aircraft design. More recently we have seen a reduction in contour size owing to the downturn in traffic volume. The forecasts for 2021 are referred to later.

AIR NOISE TODAY

9.4.28

Air noise is generated from aircraft departing and leaving the airport and is predominantly experienced through overflights. Due to this the community areas around the airport that are most affected by air noise lie to the east and west of the runway.

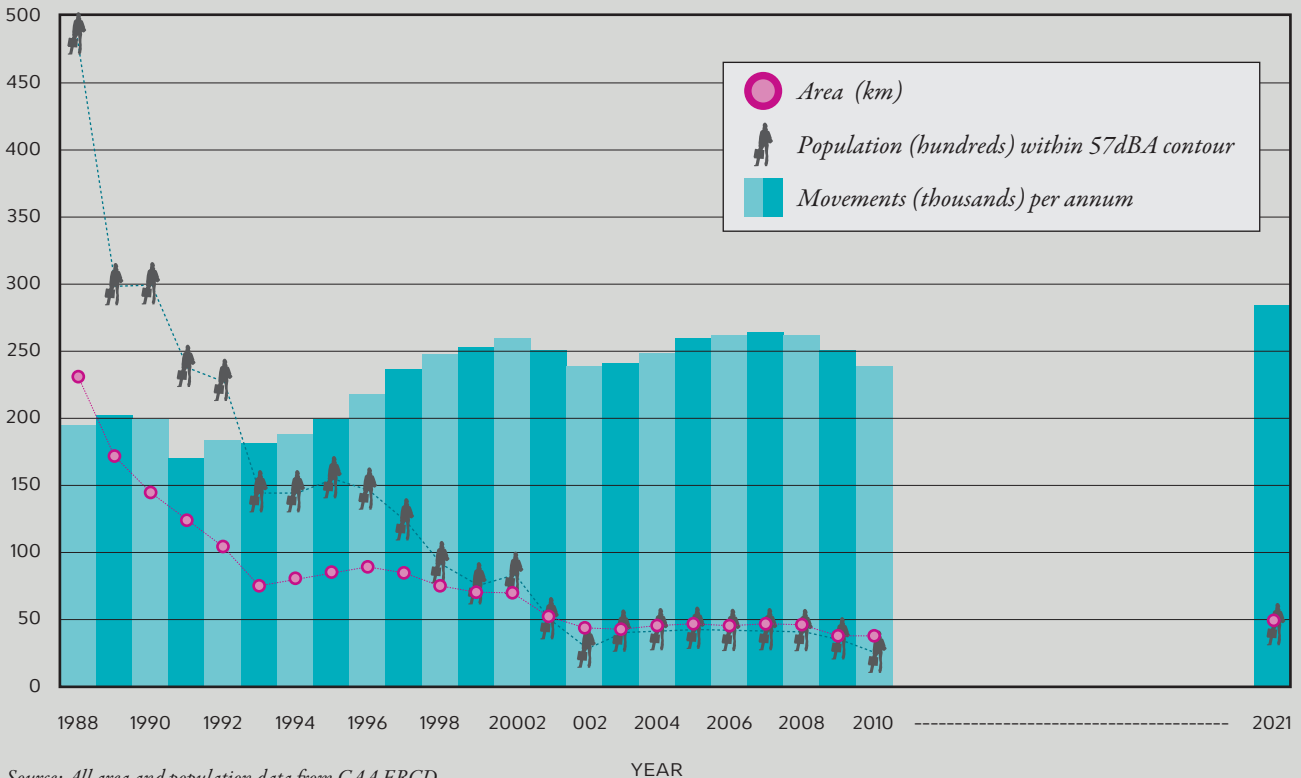
9.4.29

The noise contours for 2010 (the most recent CAA noise contours) are shown in *Figure A.5*. These show that some (but not all) parts of Lowfield Heath, Burstow, Charlwood and Fernhill Road experience what Government policy guidance considers to be a 'medium' level of noise (i.e. 63 dBA). A small number of properties off Ifield Road and some areas of Fernhill experience a 'high' level of noise (i.e. above 69 dBA). The 57 dBA contour, used by the Government to define the approximate onset of significant community annoyance, extends to the east up to Lingfield, encompassing Newchapel, and to the A24 to the west, including the southern part of Charlwood and a small part of Horley.



FIG 9.5

Gatwick traffic and noise contour area/population trend 1988-2021



Source: All area and population data from CAA ERCD.
1988-2010 relates to actual traffic. 2021 traffic is based on GAL traffic forecasts prepared by SH&E.

9.4.30

The contours are based on data from a 16 day summer average and some have suggested that this approach is both overly complicated and does not capture the true nature of noise nuisance. It is now understood that the frequency of aircraft over-flights is a growing area of concern and not just the peak or average noise levels. Sustainable Aviation are leading some research to explore alternative ways of assessing noise impact that are more representative than the current model. However the existing annual contours do provide a year on year comparison of performance and therefore, we believe, a useful tool for monitoring trends.

OUR STRATEGIES TO IMPROVE AIR NOISE IN THE FUTURE

9.4.31

Our Noise Action Plan 2010-2015, which is available from the Gatwick website, contains 55 separate actions for addressing aircraft noise at Gatwick. Many of these provide detailed action points around the strategies outlined above. In our approach to noise management we have set five key themes to help inform our priorities. These are:

- reducing noise impacts wherever practical;
- engaging with communities affected by noise impacts to better understand their concerns and priorities, reflecting them as far as possible in airport noise strategies and communication plans;
- influencing planning policy to minimise the number of noise sensitive properties around the airports;
- organising ourselves to continue to manage noise efficiently and effectively
- and continuing to build on our understanding of aircraft noise to further inform our priorities strategies and targets.

9.4.32

We also have a ten point noise management action plan to help deliver our Decade of Change vision:

- implement and deliver against the actions contained within the END Noise Action Plan;
- prioritise airlines operating Chapter 4 aircraft, or equivalent, when introducing new business to Gatwick;
- consult with airline partners on the voluntary phase out of Chapter 3 high aircraft in favour of Chapter 4 or equivalent;
- seek to introduce a 'fly quiet and clean' programme;
- actively participate in the Government night noise consultation;
- continue to fine aircraft in breach of the DfT departure noise limits and seek to increase the fining levels every 5 years;
- host a local focus forum/seminar every two years, inviting local interest groups and other key stakeholders;
- benchmark our ranking on operational noise management and communications with other comparable airports;
- implement monitor and track performance through the Flight Performance Team;
- and report performance through internal governance process and externally via stakeholder groups, websites and annual reports, actions taken from our END noise action plan.

AIR NOISE AT 40MPPA

9.4.33

As part of the 2009 North Terminal development projects planning application, an assessment was carried out on the effects of Gatwick operating at 40mppa on air noise. The air noise contours used in this assessment have been calculated by CAA using the ANCON air noise model.

9.4.34

There are currently active and planned consultations on future airspace strategies and airspace use. NATS has consulted on its Future Airspace Strategy (FAS) and is working on the London Airspace Management Programme (LAMP) which is a full review of the London control area. However, it is not expected for there to be any significant change in these areas until later this decade and no airspace changes have been built into the 40mppa model.

9.4.35

The modelling does not incorporate the use of Precision Area Navigation (P-RNAV) to be used by aircraft because its use would have masked the comparative effect of the airport growth in relation to existing air noise exposure. The introduction of P-RNAV would lead to aircraft flying more accurately along their routes, thus reducing aircraft dispersion, and hence causing an increase in noise levels directly under flight paths, but a narrowing of the air noise contours further from the airport.

9.4.36

This assessment focuses on 'day' noise, however, we are fully aware of the importance which should be placed on evening and night noise, and for locations other than residential property, such as schools and hospitals.

9.4.37

The area, population and number of households within each contour band, for the existing year (2010) and for Gatwick at 40mppa, are shown in [Figure 9.6](#). The contours for 2010 and Gatwick at 40mppa are shown in [Figure A.5](#) and [Figure A.10](#) respectively.

9.4.38

[Figure 9.6](#) shows a general increase in the area of the 40mppa noise contours when compared to the 2010 situation and increases in the populations contained within these contours. The 57 dBA contour extends slightly further to the east and west, increasing the population in this contour and including, for example, the southern edge of Lingfield.

9.4.39

Although future contours are forecast to be larger than those occurring today, this increase needs to be put into context. As reported above there has been a marked decrease in the size of contours from 2007 to 2010 which has been driven by both a change in the aircraft mix at Gatwick and also the reduction in the volume of aircraft movements over this period. As the traffic recovers and grows to 40mppa it is perhaps not surprising that the contours will increase in size, albeit not correspondingly owing to the introduction of quieter aircraft.

 FIG 9.6
Air noise 'standard' contours (LAeq 16 hours dBA) Gatwick 2010 and at 40mppa

LEQ (DBA)	AREA (SQ KM)		POPULATION	
	<i>Existing year 2010 At 40 mppa</i>		<i>Existing year 2010 At 40 mppa</i>	
>54	71.4	89.6	8,250	12,363
>57	39.6	49.3	2,450	4,952
>60	22.6	27.1	1,200	1,535
>63	12.5	14.9	300	491
>66	6.8	8.1	100	271
>69	3.6	4.4	0	31
>72	2.0	2.4	0	0

9.4.40

Figure 9.5 shows the forecast contours for 40mppa are in fact very similar in size to the noise contours experienced at Gatwick before the economic downturn. For example the forecast 57 Leq contour for 40mppa has an area of 49.3 sq km which compares with 48 sq km in 2004 (2006 Interim Master Plan refers) and 48.9 sq km in 2007. This despite the higher predicted aircraft movements.

9.4.41

These contours show average noise exposure over the summer period. Although the populations affected by each contour are expected to be larger than today, the increase in the average noise exposure within these contours will be relatively small, typically around 1 decibel. If this were a single noise event, this increase would probably be undetectable. However we understand that these contours do not tell the full story. Those affected currently by air noise will be concerned about the increase in the frequency of aircraft movements not just the average noise exposure. Therefore we outline below some further initiatives that we are investigating to address these concerns.

ADDITIONAL MEASURES TO ADDRESS AIR NOISE

9.4.42

Over the last 12 months we have been working closely with local communities and our partners in NATS, DFT and the CAA to explore opportunities for innovative solutions to existing and future noise impacts. We are currently in the process of developing ideas across a range of initiatives. While the feasibility of these has not yet been fully tested there are some promising ideas which we hope will improve the lives of those affected by noise.

9.4.43

One idea we are investigating is the possibility of 'rotating noise respite' from arriving aircraft. This would be achieved by varying the approach paths flown, on a regular and pre-notified basis, so that communities currently over-flown have a period when aircraft are diverted away from them. If deliverable this has the potential to provide predictability for aircraft over-flights and also a degree of respite for over-flights altogether.

9.4.44

We are also assessing the possibility of operating two preferential departure tracks within the same Noise Preferential Route to allow a degree of respite for people affected by departing aircraft.

9.4.45

In conjunction with both of these we continue to take part in the debate around increasing the angle of descent into the airport which, if achievable, would increase the height that aircraft over-fly communities on approach. We are also discussing reducing noise limits for departures with the DfT.

9.4.46

At the same time we will continue to follow our Noise Action Plan initiatives. For example on an annual basis we review our aircraft landing charges to ensure we gaining the maximum incentive possible within the regulatory framework.

9.4.47

Finally, and importantly, with the renewed internal focus on our Flight Performance Team we are now improving our noise communications and engaging with more noise affected communities on a more frequent basis.

9.5

Ground noise

BACKGROUND

9.5.1

Aircraft generate ground noise when they are taxiing to and from the runway, when holding, waiting for clearance to take-off and when parked on stand, if Auxiliary Power Units (APUs) are used to keep essential aircraft systems running. Ground noise is also generated during engine testing.

9.5.2

While there are other sources of ground noise at airports, for example from road vehicles, construction work or the running of building service equipment, this tends to be minor in comparison to the noise created by aircraft. Traditionally it is aircraft noise that is considered and measured in this topic.

9.5.3

Aircraft ground noise is managed through Gatwick Airport Directives (GADs) which impose restrictions on the unnecessary use of engines and APUs while on the ground and particularly while parked.

9.5.4

Background noise sound surveys have been carried out periodically at twelve locations around the airport since 1999 (see [Figure A.6](#) for the location of these measuring sites). These surveys show some small differences, both up and down, over the years but no overall consistent change in noise levels. These changes may have occurred primarily because of background road traffic flows and changes to the aircraft ground operations at the airport.

ENGINE TESTING

9.5.5

Sometimes it is essential, for safety reasons, to test the running of aircraft engines on the ground. This is usually carried out as part of the maintenance activity. When this is necessary the aircraft will be towed to one of three specified locations and the engine test conducted, although this is not permitted between the hours of 22:00 and 07:00.

9.5.6

We have a cap set by the local authorities through our S106 agreement on the number of engine tests that can be conducted over a six month rolling period. For the last six months there were approximately 160 engine tests against our set cap of 250.

9.5.7

Over the last year the rolling average number of engine tests per month has remained largely the same with no noticeable increases or spikes. If the number of engine tests were to increase to the 250 limit then we are required to consult with our local authorities on the construction of a ground run pen.

GROUND NOISE TODAY

9.5.8

The most recent ground noise assessment we have carried out in support of the 2009 NTX planning applications. The data relating to the 2007/8 baseline is reproduced in *Figure 9.7*. This shows the measured values for the 12 sites identified in *Figure A.6*. This table highlights where the current WHO thresholds of 55 dBA daytime and 45 dBA night time are exceeded. In 2007/08 there were 6 day and evening, and 8 night time exceedances.

OUR STRATEGIES TO IMPROVE GROUND NOISE IN THE FUTURE

9.5.9

Our Noise Action Plan provides specific actions designed to address ground noise. These include:

- avoidance of engine testing at night;
- avoiding the use of ground power units (GPU);
- limiting the use of APUs;
- and review of stand planning procedures in order to identify opportunities for reducing ground noise impacts.

9.5.10


All new stands are equipped with Fixed Electrical Ground Power units (FEGP). This removes, or reduces, the need for aircraft to run their APUs and has had a significant effect on reducing ground noise.

9.5.11

We have provided extensive bunds and noise walls along the northern perimeter of the airport and one of these bunds was recently enlarged as part of the North West Zone stands project. These bunds and walls help to absorb and deflect noise away from the local communities. Where our studies show that there is a meaningful benefit from their provision we are open to providing more bunds and walls in the future.

9.5.12

Taxiway layouts are designed to minimise the distance travelled, and provide sufficient capacity to reduce the need for holding aircraft, thereby reducing noise.

 **FIG 9.7**
Ground noise (LAeq) 2007/8

2007/08 <i>Site</i>	12 HR DAY <i>easterly</i>	12 HR DAY <i>westerly</i>	4 HR EVE <i>easterly</i>	4 HR EVE <i>westerly</i>	8 HR NIGHT <i>easterly</i>	8 HR NIGHT <i>westerly</i>
1	40.5	39.6	41.7	40.8	35.8	35.9
2	46.3	43.7	47.6	44.9	41.8	40
3	52.3	50.5	53.5	51.8	47.5	46.9
4	36.6	36.3	38.1	37.8	31.4	33.2
5	<25	<25	25.5	<25	<25	<25
6	46.9	46.9	49.9	49.9	41.3	41.3
7	40.4	40.5	42.8	42.9	33.2	32.9
8	56.6	56.7	58.4	58.5	46.4	46.4
9	64.3	51.2	65.5	52.5	52.6	47.6
10	53.4	52.2	54.6	53.6	48.8	48.6
11	40.8	48.8	42.2	50.1	36.8	38.9
12	36.3	42.6	37.9	44	32.5	32

9.5.13

As described above, a noise insulation scheme is available, subject to certain criteria being met, for residential properties near to the airport boundary. This scheme is expected to be reviewed and updated in 2013.

9.5.14

We will continue to work with airlines, handling agents and other business partners, for example, NATS, to reduce ground noise and improve fuel efficiency. We are also active members of the Sustainable Aviation Noise Working Group.

GROUND NOISE AT 40MPPA

9.5.15

As part of the 2009 North Terminal development projects planning application, an assessment was carried out of the effects of Gatwick operating at 40mppa on ground noise. Modelling of aircraft ground movements around the airport have been undertaken based on the forecast type of aircraft, the number of movements and expected taxiing routes.

9.5.16

There is no standard, or approved, method to assess ground noise, but the work is consistent with that done for other airports and the methodology has been rigorously examined at planning inquiries. Figure 9.8 shows the predicted ground noise levels at the twelve locations for Gatwick at 40mppa. This shows that the WHO threshold exceedances for Gatwick at 40mppa, compared to 2007/8, rise to 12 day and evening, and 10 night time. Generally, ground noise levels in close proximity to the airport are increasing, but the changes for some locations are estimated to be small and many of these changes may not be audible.

ADDITIONAL MEASURES TO ADDRESS GROUND NOISE

9.5.17

The modelled increase in ground noise for 40mppa, which is likely to be caused by the forecast growth in aircraft movements, is clearly an outcome that we will seek to avoid. It is an area that we will need to pay close attention to. Our noise management strategies need to seek both a reduction in the level of noise created, and effectively mitigate the noise that is unavoidable through, for example, shielding through the use of noise bunds and noise walls.

✈ FIG 9.8

Ground noise (LAeq) Gatwick at 40mppa

2009 NTX	12 HR DAY		4 HR EVE		8 HR NIGHT	
Site	easterly	westerly	easterly	westerly	easterly	westerly
1	44.7	43.8	43.0	42.2	41.1	41.4
2	50.3	48.1	48.7	46.4	46.6	45.8
3	56.5	54.9	54.8	53.2	52.6	52.4
4	41.6	40.2	39.8	38.3	40.2	40.2
5	27.1	25.7	25.4	<25	<25	<25
6	47.4	47.5	45.9	45.9	42.7	42.7
7	42.8	43.7	41.0	41.9	38.9	38.9
8	60.1	60.4	58.1	58.4	56.5	56.5
9	68.0	60.1	66.4	58.5	57.4	57.4
10	57.6	56.6	55.9	54.9	54.0	54.1
11	46.2	49.9	44.4	48.2	41.7	41.4
12	41.5	48.4	39.8	46.7	37.1	38.0

9.6

Waste management

9.5.18

The effectiveness of the current North West Zone bund will be reviewed to ensure it is delivering the correct level of mitigation both on noise and visual impact. An assessment of other locations around the boundary of the airport, where ground noise is projected to increase, will be undertaken to identify opportunities for the construction of additional bunds to provide mitigation.

9.5.19

One further area where we anticipate improvements, which has not been accounted for in the modelling, is the introduction of ACDM. New processes designed to promote better joint-working between NATS, GAL the airlines and the handling agents, should deliver much more efficient ground operations. This will mean that aircraft spend much less time taxiing and holding on the ground with their engines running. Not only will this reduce fuel burn and carbon emissions, but it should also significantly reduce the main sources of ground noise.

BACKGROUND

9.6.1

Waste is generated from a number of GAL operational sources and from the activities of our business partners including airlines, catering outlets, offices, shops and construction activity. Historically waste producers on the airport have been able to appoint their own waste contractors and were not required to use the common services provided by the airport. This arrangement reduced the effectiveness of those initiatives introduced by the airport to encourage waste reduction and recycling. In 2011 we appointed a new waste contractor to provide an efficient single point of contact for all airport waste. Eventually this should also include construction waste.

WASTE MANAGEMENT TODAY

9.6.2

In 2008 Gatwick generated an estimated 16,300 tonnes of operational waste. This waste is comprised of a mixture of contract waste (waste that is removed by our contractors and commonly referred to as general waste - 12,300 tonnes), waste derived from our landscaping works (green waste - 660 tonnes), airline food cabin waste (technically referred to as Category 1 waste - 3,360 tonnes) and waste that is generated by our animal reception centre (a small volume of 5 tonnes).

9.6.3

Since 2008 we have noted a consistent trend of decreasing volumes of contract waste, such that for 2011 the volume of contract waste stands at 9,205 tonnes. We have also seen a corresponding increase in the recycling component of this waste from some 26.6% in 2008 to 54.6% in 2011.

OUR STRATEGIES TO IMPROVE WASTE MANAGEMENT IN THE FUTURE

9.6.4

Our 2020 waste targets are to reduce untreated waste sent to landfill to zero, and to achieve 70% recycling. To help, we have introduced an interim waste recycling target of 60% by 2016. Our integrated approach allows us to develop realistic action plans to ensure that we hit these targets.

9.6.5

We work closely with the Airport Operators Association (AOA) and Sustainable Aviation to develop airport initiatives that achieve the standard application of Environment Agency regulations. This is especially relevant to Category 1 hazardous waste, such as food waste. Furthermore, we have convened a sustainability working group which is tasked with making sure that waste reduction and recycling policies are closely aligned to our targets for waste management at Gatwick. Key themes are to optimise the value of waste to energy schemes, and introduce initiatives to continually assess waste streams with an aim to either reducing them or increasing their content of recyclables.

9.6.6

The principles of the waste hierarchy and circular product life-cycle (illustrated in *Figure 9.9a* and *9.9b*) are considered for the existing operations and as part of the design process for new development. This approach helps to prevent waste generation and to find opportunities for re-use of materials on-site.

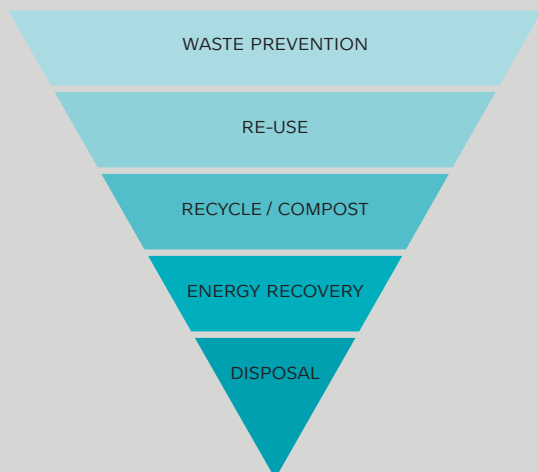
9.6.7

An example of this approach for the existing operational waste management at Gatwick, is the use of an on-site composting facility to manage green waste. Waste that cannot be prevented or re-used on-site would require off-site treatment or disposal.

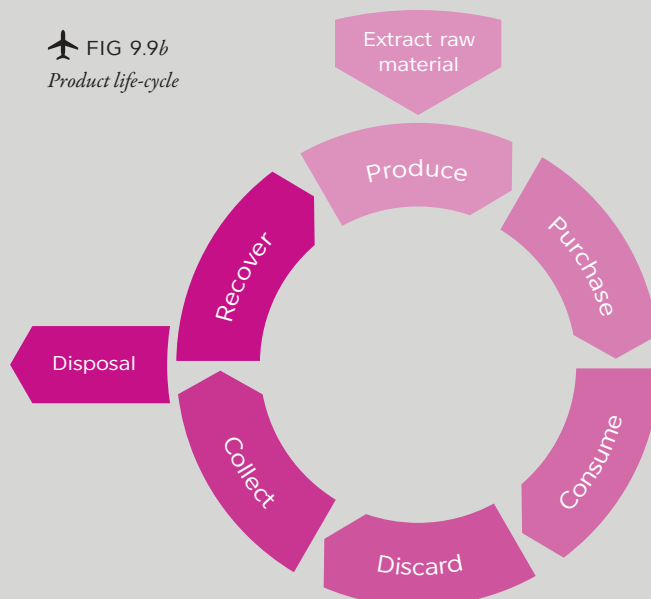
9.6.8

While all forms of waste management have the potential to adversely affect the environment, those associated with landfill are considered to be of greater significance than those associated with other forms of waste management, such as recycling and composting.

 **FIG 9.9a**
Waste hierarchy



 **FIG 9.9b**
Product life-cycle



9.6.9

A key consideration is therefore to identify the implications for landfill of solid waste that would be generated by the operation of the airport and the construction waste from proposed developments.

9.6.10

Projects are estimated to generate about 73,000 tonnes of construction waste. We aim to recycle as close to 100% of this material as possible through on-site projects.

9.6.11

Therefore in summary our strategy to reduce waste is to:

- have clear definitions of airport waste;
- continually review waste streams and areas for review
- Install new recycling bins across the airport;
- improve employee communications and behaviours to drive recycling levels;
- implement annual initiatives with retailer partners to improve waste recycling;
- implement annual initiatives with construction companies to improve waste management;
- continued engagement across industry forums such as Sustainable Aviation to drive best practice;
- maintain weekly and monthly monitoring process with waste contractor to drive improved performance;
- and report performance through internal governance processes and externally via stakeholder groups, websites and annual reports.

We are also developing plans and ideas around waste to energy solutions in partnership with external bodies, such as local authorities.

WASTE MANAGEMENT AT 40MPPA

9.6.12

We estimate that 20,250 tonnes of operational waste will be generated when the airport is handling 40mppa. The additional 4,000 tonnes of operational waste will be addressed as part of our 'Decade of Change' strategy. We will be recycling 60% of total waste generated by 2016 and aim to increase this to 70% by 2020, with zero untreated waste being land-filled. This is a significant step forward from current performance and is a challenging target for a regulated airport. This is because, under the terms of our regulation, we do not have the power to financially penalise any of our airlines for failure to achieve any recycling targets that we set.

9.7

Energy

BACKGROUND

9.7.1

The scale and volume of our buildings, coupled with the overall area of the airport means that we are a big consumer of energy. We need to reduce our overall energy consumption, not only because of the resulting carbon emissions, but also to reduce costs and ensure that our demand for energy can be met.

9.7.2

Historically there has been a strong correlation between passenger numbers and electricity consumption. We recognise that this relationship needs to be changed because, for Gatwick to grow sustainably, we need to reduce its energy consumption.

ENERGY USE TODAY

9.7.3

Against our 1990 baseline, the overall trend for electricity consumption has been upward (2011 consumption was some 9% higher than 1990) although gas consumption has been downward (2011 consumption was 36% lower than 1990). The combined use of electricity and gas (220million kwh) is approximately 8% lower than in 1990 although traffic has increased by 60% over this period.

OUR STRATEGIES TO REDUCE ENERGY USE IN THE FUTURE

9.7.4

Through our Decade of Change strategy we have set ourselves a challenging target waste energy reduction. By 2020 we aim to have reduced our energy consumption by 20% from 2010 levels. This is especially challenging given that the airport has significant growth plans over the same period.

9.7.5

We aim to drive performance against this target by ensuring all our capital projects are built to best practice in terms of energy efficiency and, where possible, go beyond this. In existing infrastructure we are engaged in a programme of upgrading energy management systems and retrofitting smart control systems to walkways and escalators in our terminals.

9.7.6

On the airfield we are replacing all lighting with state of the art low energy LED and also have recently installed a small scale photovoltaic panel bank powering airfield systems.

9.7.7

We also aim to build an energy centre, or centres, on the airport to replace current end-of-life boilers. These will be more efficient than the current system and allow better energy management across the campus.

9.7.8

Our commitment is four-fold:

- to reduce our consumption and hence reduce our carbon emissions;
- to investigate the use of renewable energy sources to ensure we are operating sustainably;
- to increase our resilience to grid and market fluctuations;
- and to ensure that our influence as a responsible user is extended to all our airport partners.

9.7.9

We have introduced an energy reduction strategy targeting those areas of the operation that are the biggest consumers. The results since the strategy was introduced, in 2010, are encouraging and we are seeing significant falls in energy consumption across three of our business units. To complement this approach we have an active programme of investment in new technologies and a staff training programme.

9.8

Water

9.7.10

We now have a new building management system in place that allows us to reduce energy consumption in parts of the airport that are not currently in use. This system also controls passenger comfort levels so that overall energy usage is optimised.

9.7.11

Sustainability for us is not simply about being more energy efficient. Recognising the role of carbon within the environmental agenda, we are researching and investing in opportunities to source energy, from low and zero carbon technologies, such as photovoltaics and energy derived from waste.

ENERGY USE AT 40MPPA

9.7.12

Our strategy is that, for Gatwick at 40mppa, we will have achieved an energy reduction of between 15% and 20% on the 1990 (the usual base line the Government uses for climate change issues) use. This will result in an overall energy consumption of some 190,000mwh.

9.7.13

During this decade all of our new buildings will be either zero carbon or very close to being zero carbon. Our lighting will be energy efficient across the airport, including the taxiways, and our energy equipment will be controlled through a comprehensive building management system. In other aspects of energy use, measures that bring energy efficiency will be evaluated against cost and application, and included, where appropriate, into the design stages when assets are being replaced.

OUR STRATEGIC APPROACH TO FLOOD RISK

9.8.1

In order to manage surface water drainage and comply with the Environment Agency discharge consents, we have constructed a number of storage reservoirs (balancing ponds) which are used to regulate the rate at which rainwater flows into the River Mole and other water courses.

9.8.2

Understanding that the impact of flooding (which occurred in 1968 and, to a lesser extent, again in 2000) stretches far beyond the financial, we are working with the Environment Agency and Crawley Borough Council to develop a new approach to this. We have:

- contributed over £4 million to the Upper Mole Flood Alleviation Scheme (UMFAS) that allows us to develop airport buildings and infrastructure, taking advantage of an increased level of flood protection, along with reducing flood risk for thousands of people living in Crawley and South West Horley;
- entered into a relationship with the Environment Agency and Crawley Borough Council to draft a proposal on how future on-airport development proposals should be considered. This will be formalised by Crawley Borough Council as supplementary planning guidance for consultation during planning applications;
- and carried out a study to offer further protection to South Terminal, which will be discussed with the Environment Agency.

9.8.3

With increasingly heavy rainfall predicted as a result of climate change and a changing operating environment, we have to demonstrate our ability to manage and mitigate flood risk. Our goal is to provide confidence to operators and partners that Gatwick has sufficient resilience for a stable operating environment.

9.8.4

Managing developments in line with the strategic flood risk agreement will ensure that further flood alleviation is achieved by releasing space within the flood plain. Additional protection will be offered to key assets, such as sub-stations, that are currently at risk of flooding by repositioning them above the flooding high water mark or moving them out of the flood plain.

WATER QUALITY

9.8.5

Managing water sustainably is a key priority for maintaining the health of the aquatic environment around Gatwick. In 'Decade of Change' we explain how we are committed to maintaining the 'good' standard of the rivers (a standard verified by the Environment Agency) near the airport.

9.8.6

The airport has quarterly program of river ecology monitoring to ensure that the environmental impact on the local water courses is understood and any improvements to river health are recorded. The program of river ecology monitoring will assist the business in quantifying the benefits of infrastructure improvements that are underway and show our regulators we are serious about maintaining the "good" status of water courses surrounding Gatwick.

9.8.7

We are investing in significant infrastructure upgrades to ensure that we can meet our discharge consents and maintain the quality of the water that flows from the airport. Since 2008, we have invested £5 million on enhancements to our pollution control systems (for example, upgrading Ponds D and E) with a further £7 million planned for expenditure by 2013 on expansion of the pollution lagoon east of the railway.

9.8.8

The cold winters of 2009/10 and 2010/11 produced large volumes of de-icer contaminated surface water run-off, exceeding the storage / treatment capacity available to the airport. We have a comprehensive programme of work to manage these chemicals and so progressively reduce the volume of polluting chemicals discharged to local water courses. These measures include additional polluted water storage, new treatment plant to increase rate of treatment, improved targeted de-icer application and continuing aircraft de-icer recovery.

WATER CONSUMPTION

9.8.9

South East England is an area of the UK which is relatively dry. We are committed to reducing our water consumption over the longer term. Our consumption had previously hovered around the 1 million m3 per year mark. However throughout 2011 a focus on water infrastructure management and the detection and fixing of leaks has reduced our consumption by over 20%.

9.8.10

We are confident that our new management techniques will help to reduce water consumption. For example, we are introducing automated metering which will enable us to target specific areas of the airport where we can make the greatest difference, through:

- installing water efficient measures, such as low flow taps and dual flush toilets;
- improving leak detection and repair;
- and an education programme for employees and passengers.

9.8.11

Water efficiency is also a critical element of our design and planning for new infrastructure. In all new developments, and in the upgrade of existing infrastructure, we assess the applicability of incorporating rainwater harvesting and recycling grey water (generated from activities such as laundry, dishwashing and bathing) in an effort to reduce our footprint.

9.9

Landscaping and biodiversity

9.9.1

Our landholding includes some 132 ha of landscaping as described in Section 5.2. Landscaping within the airport will remain a key feature of most publicly accessible areas. We are revising our landscaping strategy so that it is more sympathetic to our biodiversity aspirations. We anticipate seeing the development of wildlife corridors across the airport to support species which are currently only prevalent in non-operational areas (and off-airport), in order to increase overall biodiversity. Ecological reviews of these landscaped areas are undertaken periodically. When formulating new planting and biodiversity projects, consultation takes place with our aerodrome safeguarding team and airfield operations to ensure no increased risk to aircraft operations through bird-strikes.

9.9.2

The North West Zone supports important areas of semi-natural broadleaf woodland (including Brockley Wood, which is included on the National Inventory of Woodlands and Trees) connected by mature hedgerows bordering fields of semi-improved grassland. Many of the hedgerows are associated with periodically wet ditches, and there are a number of wetlands that range from marshy grassland to relic ox-bows of the original course of the River Mole.

9.9.3

The North West Zone supports at least six species of bat and approximately one third of all bird species, recorded in the North West Zone, are either 'red' or 'amber' listed on the Birds of Conservation Concern (BoCC) register.

9.9.4

The new course of the River Mole, diverted from its original course in 2000, has developed good formations of riffle and pool sequences, with shallow backwaters. The channel is bordered by a combination of wet grassland, reed beds, scrub and exposed mud.

9.9.5

A further landscaped area lies to the east of the railway. This consists of a combination of semi-natural broadleaf woodlands (two being designated as ancient woodland), connected by a mature hedgerow network bordering fields of semi-improved and improved grasslands. The Gatwick Stream, as well as a number of ditches, flows through the site and upwards of six water bodies of varying sizes, and successional stages, have been recorded.

9.9.6

At least three species of bat have been recorded in this area and approximately one third of all bird species are either 'red' or 'amber' listed on the BoCC register. Great-crested newts, along with palmate and smooth newts, frogs and toads, two nationally scarce species of water beetle and a population of grass snakes have also been recorded.

FUTURE LANDSCAPE AND BIODIVERSITY

9.9.7

For Gatwick in 2020 the new projects across the operational area of the airport are expected to have a minor impact on landscaping. Mitigation schemes will comply with the landscape strategy which, in itself, will be sympathetic to our overall biodiversity aspirations.

9.9.8

New projects may have implications on biodiversity in three main areas. Firstly the current project to extend the existing pollution lagoon east of the railway line - this is required to ensure we meet our obligations to protect the River Mole from pollution. The new arm of the lagoon will extend northwards into a wildflower field which, currently, is assessed as being of medium to high level of amenity value, but a low level of ecological sensitivity (in respect of the neighbouring habitats).

9.9.9

The lagoon extension has been planned as far as possible to reduce the impact on biodiversity. The additional lagoon will be constructed as a stand-alone structure; this is to ensure that an area of mature woodland between the two lagoons is retained. This area of woodland has been identified as a valuable habitat for newts and bats. In addition the project will incorporate biodiversity improvements such as wildflower seed mix on outer slopes of new lagoon embankment.

9.9.10

Secondly there are plans to develop further flood mitigation works for the River Mole using land east of the railway. While these proposals are at an early stage of the development phase, it is considered that the potential ecological effect will be much less than that arising from the pollution lagoon extension.

9.9.11

Thirdly the potential new hangar construction in the western part of the airport could result in the loss of a small area of woodland although it is not expected to have any impact on Brockley Wood. Should a further study decide that this is the best location for a new hangar, suitable mitigation schemes would be needed to address any impact on any biodiversity. This would be in addition to any mitigation needed address other effects of this development such as noise or visual impact.

9.9.12

Over the next 10 years we want to ensure that our ecological footprint is understood and adverse impacts reduced. We will focus on the creation of biodiversity plans across three habitats: hedgerows /pastureland, water courses and woods; making sure works are undertaken to enhance the biodiversity of these habitats. By 2015 we aim to have achieved a nationally recognised award for biodiversity stewardship and by 2020 be able to demonstrate that our overall biodiversity and ecological health has improved across the campus.

10

Gatwick Airport in 2030

10.1

Introduction

10.1.1

This section describes how we expect Gatwick Airport to develop beyond 2020. The 2003 ATWP looked out to 2030 as did our 2006 Interim Master Plan. We have chosen the same planning horizon for this chapter as the fast-changing environment in which Gatwick operates makes it very difficult to form a longer term view.

10.1.2

As with the 2006 Master Plan, we have subdivided this chapter into a description of Gatwick in 2030 as a single runway airport and also as a two runway airport. The second scenario, pursuant to the conclusions and requirements set out in the Government's 2003 White Paper, contemplates the possibility of a wide-spaced second runway being constructed to the south of the current airport some time after August 2019. The description of that scenario is contained in Section 10.3.



10.2

A single runway airport – 2030

10.2.1

We believe that the constraints of a single runway will start to become more apparent soon after 2020 when potential demand will start to be lost, or transfer to other airports. While we expect there to be continued growth after this time, it will become progressively more difficult as the most commercially valuable runway slots are used up.

10.2.2

Further limited growth is theoretically possible through a combination of additional services in off-peak times and through higher average passenger loads on each flight. The extent to which passengers and airlines are prepared to fly at less attractive times of the day or year is debatable, as is the rate at which airlines will introduce larger aircraft into their fleets. However, we believe that growth could continue, at progressively slower rates, for a few more years after that time.

10.2.3

The 2006 Interim Master Plan suggested that by 2030 a single runway Gatwick will see passenger numbers at, or comparatively close to, the runway’s maximum use capacity of around 45mppa. We continue to hold this view and have used this throughput as the basis for the following description.


LAND USE PLAN AND INFRASTRUCTURE DEVELOPMENTS

10.2.4

The expected airport layout in 2030 is shown in [Figure A.11](#), which shows how land use could change in comparison with today and [Figure A.12](#), which identifies likely changes in infrastructure.

10.2.5

In order to accommodate 2030 traffic volumes we expect to have made some further changes to the airport, but we don’t expect any significant change in the overall pattern of land use, as is shown in [Figure 10.1](#).

 FIG 10.1
Comparison of land use zones

	AREAS IN HECTARES	
	2011	2030
Airfield	228	229
Terminals	18	18
Aprons	161	164
Cargo	11	11
Maintenance	9	13
Ancillary	33	37
Surface transport	145	145
Strategic landscaped areas	132	132
Undeveloped land	22	10
TOTAL	759	759

10.2.6

While the growth in passenger numbers would cause some increase in peak hour passenger throughput, the capacity constraints of the runway will mean that much of this growth will have to take place outside the peak. It is primarily peak hour throughput that drives facility requirements though, so any additional processing capacity needed would be relatively small.

10.2.7

We can’t be sure about infrastructure requirements for 2030 since we don’t know the exact composition of the traffic, but we can make some fairly high level predictions.

AIRFIELD FACILITIES

10.2.8

In Chapter 6, we describe our expectation that the airfield (with the exception of the runway) will be reconfigured by 2020 to provide Code F compliant infrastructure. While the main runway is expected to remain as Code E in the years up to 2020, we don't think this would be an obstacle to A380 operations.

10.2.9

Beyond 2020 we will look at the possible need to upgrade the runway to Code F (i.e. widen the main section of pavement from 45m to 60m) and, if this is needed, the work would probably be completed by 2030.

10.2.10

It's possible that some work would be needed to optimise runway configuration so that its full capacity potential can be used. One possibility is that runway capacity can be increased by providing additional Rapid Exit Taxiways (RETs). These enable landing pilots to vacate the runway at higher speed, thereby reducing the time interval before the next aircraft movement. We will continue to explore the capacity benefits of new RETs and, if these can be quantified, we will consider their provision.

10.2.11

We would also see further replacement projects on things like worn taxiways, ground lighting systems and drainage.

PASSENGER TERMINALS

10.2.12

The small expected growth in peak hour passenger volumes means it is difficult to envisage the need for significant expansion of our terminals, though we might need to reconfigure them internally - a requirement that could arise through changes to security or border control processes, the application of new check-in technologies or the introduction of new passenger services. Replacement and upgrade projects are also likely.

APRONS AND PIERS

10.2.13

By 2030 it's likely that we'll need some additional remote stands because there will be more aircraft movements, and average aircraft size will have increased. [Figures A.11](#) and [A.12](#) illustrate these additional stands, which would most likely be in the North West Zone.

10.2.14

More aircraft movements might also mean we need more pier-served stands. The expansion of the pier system for South Terminal is very difficult so it's likely that these additional pier-served stands will serve North Terminal. One possible solution would be to build a new pier serving the remote stands adjacent to the control tower, as shown on [Figure A.12](#).

CARGO FACILITIES

10.215

The forecast growth in cargo suggests that we wouldn't need to expand the cargo sheds.

AIRCRAFT MAINTENANCE

10.216

By 2030 we could need another aircraft maintenance hangar. On *Figures A.11* and *A.12* this is shown in the North West Zone, next to the new hangar assumed for 2020.

ANCILLARY ACTIVITIES

10.217

By 2030 the south-side area previously occupied by aircraft maintenance hangars will be fully developed for ancillary support. One possibility is that the vehicle maintenance operation, which is currently to the south of the Virgin Atlantic Hangar, would be relocated to south-side to make way for the remote stands referred to above.

SURFACE TRANSPORT FACILITIES

10.218

It is likely that some additional public long stay car parking will be required by 2030. These spaces are likely to be accommodated by the additional decking of both terminals' existing long stay car parks. Additional spaces may also be needed if the local authorities are successful in closing unauthorised off-airport car parks during this period.

10.219

There is likely to be the need for further improvements to the bus and coach facilities at Gatwick, with the possible provision of additional bays and measures to address the potential for congestion on the forecourt road system.

10.220

Even with further increases in the share of passengers using public transport, it is likely that there will be an increase in road vehicle journeys around Gatwick by 2030. These will be associated not only with the growth of the airport, but also the increase in non-airport related trips which, for some sections of road, could be more significant.

10.221

We believe that there are opportunities for further capacity improvements to the critical road junctions around Gatwick that will be most affected by an increase in traffic volume in the years up to 2030. These will need to be investigated nearer the time.

10.222

It is obvious to existing rail users that certain services serving Gatwick are already under pressure at peak times. The improvements described in Chapter 6 will help accommodate the growth to 2020, but beyond this timeframe further improvements are likely to be needed. We will want to work with Network Rail and the train operating companies to examine the most critical sections of the rail network which are likely to include the stopping services between Gatwick and Victoria.

10.3

A twin runway airport – 2030

INTRODUCTION

10.3.1

We have no current plans for a second runway and we remain fully committed to the 1979 legal agreement with WSCC precluding the construction of a new runway before 2019.

10.3.2

However, while our focus is firmly on improving the existing single runway airport, we believe that there is a possibility that a second runway may be needed sometime in the future. We will continue to safeguard land for future expansion because we believe it to be sensible business practice and it supports current Government policy.

THE SAFEGUARDED SCHEME

10.3.3

A range of options exists for the location of a second runway at Gatwick and several of these were considered by the previous Government as part of their studies that preceded the publication of the Air Transport White Paper (2003) (ATWP). The runway option described here is the one recommended in the ATWP.

10.3.4

As explained below, this option features a southern wide-spaced runway and allows for mixed mode operations. The ATWP explains that this wide-spaced runway option is likely to have a greater capacity, but also greater environmental impacts than options with a closer runway separation. If we were to initiate any work on a second runway we would want to re-evaluate a range of runway location options. Minimising environmental impacts would be central to this process.

10.3.5

The southern wide-spaced runway refers to a layout in which the distance between the existing and new runway centrelines is 1,035 metres. This is the minimum separation permitted by CAA design standards for independent mixed mode operations, where both runways can handle a combination of arriving and departing aircraft. This maximises their potential capacity for both aircraft movements and passengers.

10.3.6

This separation is relatively narrow when compared to other airports; for example, the current arrangement at Heathrow (1460m separation) and that proposed by BAA for a second runway at Stansted Airport (2200m separation). The two runway airport layout, as shown in the 2006 Interim Master Plan, is reproduced in [Figure A.13](#).

10.3.7

The ATWP based layout plan adopts the principles that:

- The second runway should be of similar operational length to the existing runway.
- There would be a need for a third passenger terminal which, with its apron areas, could be accommodated within the area between the runways.
- Land between the runways, west of that required for aprons, could accommodate any necessary additions to cargo and aircraft maintenance facilities, but its main use might be for landside activities, such as staff car parking and flood management areas.
- The area for landside airport facilities to the east of the railway would need to be substantially extended to accommodate a transport interchange (including areas for coach parking and car rental), car parks and front line ancillary facilities such as offices and hotels.

- Land between the M23 and the Balcombe Road might also be required for, or affected by, new road connections to the third terminal and other facilities. Parts of the additional area and of the existing airport could also be needed for realignments of local roads, particularly the A23.
- Land would be required for landscaping the airport, attending to biodiversity and, where practicable, retaining trees, woodland and significant other habitats that lie within the enlarged airport.
- A proportion of land would be required for a diversion of the River Mole and the associated provision of flood plains or ponds in order to address flood risk.
- As much as possible of the existing infrastructure should be retained, for example, the Crawley sewage treatment works.
- The layout should not extend to the North West into the Green Belt near to Charlwood village.
- The western boundary of the extended airport area should provide space for perimeter roads and services (including drainage) to be routed around the end of the airfield.
- A strip of land, west of the railway and south of the new runway, would be required for airfield purposes and for a landside area containing a perimeter road, service corridor and space for an effective landscape buffer between the airport and adjacent properties. The landscaped area might include some ground moulding to contribute to visual screening.

✈ FIG 10.2

Indicative areas and land uses

Land use	AREAS IN HECTARES	
	Existing airport	Two runway airport
Airfield	228	442
Terminals	18	31
Aprons	161	346
Cargo	11	
Maintenance	9	
Ancillary	33	522
Surface transport	145	
Strategic landscaped areas	132	
Undeveloped land	22	
TOTAL	759	1341

10.3.8

There would need to be an assessment, as part of the airport development programme, of opportunities for the provision of relocation sites for businesses whose premises are lost as a result of the airport's development, or if they should be at risk of closure for want of suitable sites elsewhere in the locality.

10.3.9

The ATWP asks for airport operators to safeguard for the possibility of airport expansion. Gatwick fulfils this responsibility through the aerodrome safeguarding process (see Chapter 3) through which we fulfil a legal obligation, as a statutory consultee, to review and comment on local planning applications such as:

- proposals for development that are incompatible (for example, a tall building) with 'safeguarding of aerodromes' criteria specified in relation to the location of the second runway;
- and proposals for development on land within the second runway area.

10.3.10

A safeguarding map, endorsed by the CAA, has been prepared for Gatwick. It relates both to the existing runway and to a parallel southern runway, positioned 1,035m apart, with the paved surface of the southern runway assumed to be 3,500m long and at an elevation of 61m above sea level, which is consistent with the ATWP wide-spaced runway. The map was originally lodged with relevant local planning authorities in Autumn 2006 and is used by them as a filter for determining which planning applications require consultation with Gatwick under the safeguarding regime.

10.3.11

The safeguarded land is predominantly in Crawley Borough, but also includes 106 ha in Horsham District and 4 hectares in Mole Valley. This is included in Crawley Council's Local Development Framework Core Strategy and defined in policy G2:

POLICY G2

The Proposals Map identifies land which should be safeguarded from development that would be incompatible with expansion of the airport to accommodate the construction of an additional wide-spaced runway, together with a commensurate increase in facilities contributing to the safe and efficient operation of the expanded airport in accordance with advice in PPG 13 (Annex B).

Minor development within this area, such as changes of use, and small-scale building works such as residential extensions will normally be acceptable. BAA Gatwick [now Gatwick Airport Limited] are consulted on all planning applications within the safeguarded area.

SURFACE ACCESS

10.3.12

In Gatwick's immediate locality, the enlargement of the airport along the lines of the safeguarded scheme would result in the loss of sections of a number of local roads and sections of the A23. These roads would need to be diverted, or realigned, in order to ensure that they serve the needs of drivers. For example, a new terminal south of the current South Terminal would require substantial road changes to provide access from the M23. The prospect of a capacity shortfall on the M23 as a consequence of growth in background and airport traffic could result in the need for the M23 to be widened from a dual three to dual four lane highway.

10.3.13

It would be essential for enhanced public transport infrastructure to be provided with increased services and direct destinations to the airport by both rail and coach. At Gatwick the current rail station and railway infrastructure would need to be enlarged and improved, as would the passenger interchange facilities for bus and coach travellers.

ENVIRONMENTAL EFFECTS OF A SECOND RUNWAY

10.3.14

The environmental effects described below are reproduced from the 2006 Interim Master Plan which in turn drew on the ATWP and supporting studies. These effects relate to the current safeguarded scheme for a second runway at Gatwick.

AIR NOISE

10.3.15

Estimates of future aircraft noise using the Leq metric around Gatwick were prepared by the CAA ERCD division for the ATWP. These noise estimates were prepared for a mixed mode twin runway operation at Gatwick, with 486,000 PATMs in 2030. In preparing the noise contours, the existing noise preferential route structure has been assumed. These noise estimates were prepared many years ago, and since then increasing numbers of quieter aircraft are in use. Thus the eventual noise climate is highly likely to be better than that which these noise contours depict. The noise contour is shown on [Figure A.14](#), and the area, population and number of households enclosed within the contour bands is shown in [Figure 10.3](#).

10.3.16

In order to provide a comparison and to place noise effects in context, figures for Gatwick (one and two runways) and Heathrow (two runways) in 2008 are shown in [Figure 10.4](#).

 FIG 10.3

Noise effects in 2030 (ATWP 2003 data)

LEQ (dBA)	AREA (sq km)	POPULATION	HOUSEHOLDS
>54	138.6	29,600	11,900
>57	84.0	13,200	5,200
>60	52.5	4,600	1,700
>63	33.1	1,800	700
>66	19.3	500	200
>69	9.9	100	<100
>72	4.8	<100	<100

Source: CAA Revised future noise exposure estimates for UK airports, ERCD 0308, December 2003

10.3.17

The areas that would receive more noise are principally the northern areas of Crawley, including the Manor Royal business district, and the residential area north of Ifield.

10.3.18

This work was done several years ago. Since then, there has been a range of changes to the way noise impacts are evaluated. These include the use of other noise metrics, the use of noise difference rather than absolute noise, evaluation of noise effects during the day, evening and night periods, and the effects of noise in places other than communities (for example, the countryside). These changes would be addressed by the environmental assessment of any new scheme that might be brought forward in the future.

 FIG 10.4

Noise impact comparison

LEQ (dBA)	AREA (sq km)	POPULATION	HOUSEHOLDS
2009 Gatwick ¹ (one runway)	41.0	3,600	NA
2009 Heathrow ¹ (two runways)	112.5	245,250	NA
2030 Gatwick ² (two runways)	84.0	13,200	5,200

Source:

- 1 Noise exposure contours, ERCD report 1002 Gatwick and 1001 Heathrow, 2010
- 2 Revised future noise exposure estimates for UK airports, ERCD 0308, 2003

AIR QUALITY

10.319

Air quality around an expanded airport will need to comply with EU and UK mandatory air quality limit values. For aviation the significant emissions and those that are regularly monitored are: NO₂, NO_x and Particulate Matter – PM₁₀ and PM_{2.5}.

10.320

Of these, NO₂ emissions are the most important in terms of being close to the annual mean limit for NO₂ of 40µg/m³ for residential areas. Fortunately, the countryside setting of the airport, albeit between the urban areas of Crawley and Horley, and its relative distance from busy highways, mean that background levels of NO₂ emissions are relatively low. Consequently there are relatively few residential properties that are likely to be effected by these emissions. The southern part of Horley, nearest to the airport, is of concern, and detailed studies would need to establish that this area is below air quality objective values with an expanded airport.

HERITAGE

10.321

The land which would need to be acquired for the expansion scheme, currently safeguarded, amounts to about 600 ha. It is predominantly agricultural, but there are about 200 residential properties, a church, two groups of commercial premises (one in Lowfield Heath and the other around the northern end of Gatwick Road), other commercial properties and woodland.

10.322

Some of the properties are of heritage value, including 18 listed residential buildings, the Church of St. Michael and All Angels in Lowfield Heath (Grade II) and Gatwick's original 'Beehive' terminal building (Grade II*).

10.323

While every effort would be made to avoid, retain and/or reuse buildings, the majority would require demolition. For listed buildings, there might be opportunities for some to be dismantled, saving their historic fabric for reconstruction at an off-airport site.

10.324

We are committed to ecological protection and enhancements through our action plans. This will ensure that every effort would be made to retain existing areas of hedgerows and woodland. Where this wasn't possible, for operational reasons, re-provision through extensive new planting would be undertaken.

BLIGHT

10.325

The ATWP stated that Gatwick should put in place a scheme to address the problem of generalised blight resulting from the runway safeguarding. Following a period of consultation, Gatwick announced two schemes in July 2005:

- A Property Market Support Bond, applicable to residential, agricultural and small commercial properties situated within the safeguarded area, guaranteeing that if we announce our intention to apply for planning permission for a second runway, we will, subject to various qualifying criteria, buy the property at a price index linked to June 2002 property prices.
- A Home Owner Support Scheme, applicable to similar categories of property situated outside the safeguarded area, but falling within a 66 dBA Leq noise contour for the new runway. This will allow eligible property owners to require us to purchase their property for its agreed unblighted market value if, and when, having secured planning permission, we announce our intention to construct the second runway.

10.326

Full details of these schemes are available on the Gatwick Airport website.





Consultation on the Draft Master Plan

CONSULTATION PROCESS

11.1

GAL published its draft master plan on 13 October 2011 and at the same time launched a 3 month public consultation exercise. The purpose of the consultation exercise was to ensure the following outcomes:

- To secure community and stakeholder feedback to help shape the final master plan;
- To ensure that the consultation was open and transparent;
- To ensure best practice in the consultation process;
- To encourage participation and involvement in the process;
- To encourage views from all, not just special interest groups;
- To enable multiple response mechanisms;
- and to increase awareness about Gatwick's plans.

11.2

The consultation, which ended on 13th January 2012, featured:

- Ten days of public exhibitions at six separate locations;
- Nineteen facilitated workshops held at six separate locations;
- Talks given at two lunch events;
- A dedicated consultation website;
- Letters to 398 representatives of 30 local County, District, Borough and Parish Councils;
- Letters to 43 Members of Parliament;
- Leaflets mailed out to 3,568 residents and 689 businesses;
- Over 40 separate articles or reports in press and media;
- and two exhibitions inside the airport to staff.

11.3

The feedback on the draft master plan came in the form of:

- 189 completed and returned comment cards from the exhibitions;
- 34 responses posted on the website;
- Facilitated and recorded discussion at the 19 workshops;
- 29 written responses by post and e-mail;
- and 15 calls to the telephone helpline.

Appendix B provides details of those that provided written responses.

11.4

We are delighted with the results of this consultation exercise and the level of interest that has been shown in Gatwick and the new master plan. This consultation exercise has given us a valuable insight into the issues that we may need to take into account in the course of growing Gatwick, and delivering our vision of becoming London's airport of choice.

11.5

The extensive feedback received has played a key role in the process of finalising our master plan. Where possible, we have addressed a wide range of the substantive comments made during the consultation period. The remainder of this chapter explains the changes that have been made to the master plan as a result.

11.6

The table below captures the key themes of comments made by respondents to our consultation, as recorded in the participation report⁴⁰, which we published in March 2012. The table also provides GAL's response to these comments and identifies how the Final Master Plan has been shaped by them.

11.7

For the sake of brevity, comments which were simply statements of fact, or statements of support for aspects of the master plan, have not been included. While we welcome all such statements, we do not believe they warrant a specific response in the context of our finalised master plan.

Comments received on Draft Master Plan

Gatwick Airport's response

1 OUR AMBITION AND STRATEGY

- 1.1 Some respondents questioned the accuracy of figures quoted in the draft master plan with regard to both the Airport's economic contribution and future employment projections.
- 1.2 The majority of representations submitted by local authorities were supportive of Gatwick's overall ambition, primarily for economic reasons. However, some noted the need for improvements to the transport network.
- 1.3 A number of parish councils, particularly those to the east and west, were concerned about an increase in the number of flights proposed in the draft master plan, mainly because of issues relating to noise and emissions.
- 1.4 GATCOM noted that no mention is included in the draft master plan of the long-term investment focus of the new owners of Gatwick.
- 1.5 The point was made by several business representatives that Gatwick offers a limited choice of routes to certain European cities and to destinations in the Far East; an issue that was considered something for Gatwick to address. Business representatives also considered that Gatwick is becoming too focused on low-cost leisure flights and should strive to attract more flag-carrying airlines and encourage more business travel.

To reflect these concerns, we have updated both our employment and economic benefit estimates and provided more information on how these have been calculated. These can be found in Chapter 8.

See response in Section 5 below.

See response to Section 8 below.

Gatwick's strategy to 2020 is supported by our five separate owners, all of whom are represented on our board of directors. If a change of ownership, or shareholding structure, were to take place within this timeframe, we do not envisage that there would be any material impact on the development intentions that we have outlined in this master plan.

Chapter 2 has been updated to reflect our recent successes in attracting new long haul services to Gatwick and mentions our efforts to build on this success by extending further the range of destinations that can be reached from Gatwick. Chapter 2 also clarifies our airline development strategy, which focuses on growing business centered services, whilst also supporting the growth of existing short-haul leisure carriers. These currently form the majority of our services.

Comments received on Draft Master Plan

Gatwick Airport's response

16 There was, however, a view that Gatwick's growth plans actually contradict the Government's own aspiration to reduce carbon emissions. A point was also made that Gatwick's six strategic priorities do not include any relating to the environmental impact of aviation.

Regarding carbon emissions see response to 7.1 below. Regarding the strategic priorities, our fifth is to 'build a strong environment, health and safety culture'. When combined with our environment strategies outlined in Chapter 9, GAL considers this adequately covers our commitment to address environmental impacts.

17 Gatwick's Decade of Change document refers to a 10-point sustainability plan covering a range of environmental and socio-economic initiatives. A frequent comment recorded was that the expansion of Gatwick was a good thing but that this growth should be sustainable. Whilst there was broad acceptance of the benefits that Gatwick delivers to the economy, it was felt by some that greater consideration should be given to the environmental impacts of expansion.

The Environmental section (Chapter 9) of the master plan has been significantly expanded in response to specific points raised in sections 7, 8 and 9 below.

18 Many welcomed the initiative by Gatwick to engage with local communities and there was broad agreement that Gatwick was getting better at this - but could always do more and it was noted that the airport should place a greater emphasis on community engagement in the future.

Gatwick is committed to growing responsibly in partnership with our local communities and welcomes opportunities to engage with them. However we are also mindful of the statutory role of GATCOM, our consultative committee, as the correct forum for consultation and approval of on wider stakeholder issues. Chapter 2 has been modified to clarify this issue.

2 AIR TRANSPORT FORECASTS

2.1 One widely-shared response questioned the accuracy of the forecasts concerning aircraft movements and passenger numbers bearing in mind the uncertainties of the current global economic climate, rising fuel prices and pending increases in Air Passenger Duty.

Our forecasts are produced by independent expert forecast consultants and represent a realistic assessment of the growth prospects for Gatwick. Some additional information on the input assumptions has been provided in Chapter 4.

2.2 There was a suggestion that Gatwick should seek to change the balance away from leisure destinations/routes and attract other airline and routes that served a higher proportion of business passengers.

See response to 1.5.

Comments received on Draft Master Plan

Gatwick Airport's response

2.3 GATCOM (Gatwick Airport Consultative Committee), commented that Gatwick should also consider the changing needs in terms of airport facilities of future overseas passengers from newly-served destinations.

Chapter 2 now provides additional information on how we are seeking to understand the needs of all our passengers and provide them with the best possible service.

2.4 Several respondents raised the issue of the source information and studies on which the passenger numbers and aircraft movements forecasts had been based and stated that it was difficult to verify the assumptions made without knowledge of the sources.

See response to 2.1

2.5 One group challenged the accuracy of the on-airport future job numbers, suggesting that these were "exaggerated".

The on-airport employment forecasts shown in our draft master plan were produced according to accepted best practice, using data available at the time. In Chapter 4 we explain that our traffic forecasts have now evolved and, based on these, and a new employment survey, the on-airport employment forecasts have been updated. Chapter 4 provides information on how these employment forecasts have been produced.

2.6 Several local authorities and parish councils along with some local residents expressed concerns that the forecasted increase in aircraft numbers would in their view increase the noise disturbance to communities near to the airport and also increase the CO2 emissions.

See responses in Sections 7 and 8.

3 DEVELOPMENT PRINCIPLES

3.1 The point was made that although increased automation is a good thing, for some, delivering the best passenger experience means not losing the human face and the commitment to staff training was seen as very important.

We agree with this comment and Chapter 2 describes the passenger research we have carried out to understand the needs of our passengers so that we can provide a better service.

3.2 A high proportion of business representatives stated that Gatwick should work to encourage airlines to offer a greater choice of destinations.

Chapter 2 now explains how we are working to expand the Gatwick route network.

Comments received on Draft Master Plan

Gatwick Airport's response

3.3 Some also considered that they supported an increase in cargo provision at Gatwick but there was a concern that this may lead to an increase in night flights.

The cargo forecasts presented in Chapter 4 have been updated and there is more explanation on what this may mean in terms of cargo flights.

3.4 It was commented that Gatwick should strive to work more closely with universities and colleges and there was support for Gatwick working to increase the local skills base and to encourage apprenticeships.

We agree that there is a clear need for Gatwick to play a greater role in supporting the local skills base. In Chapter 8 we explain that since the Draft master plan was published, we have launched a new apprenticeship scheme for airport security officers, which was developed in partnership with Central Sussex College. We also continue to support four year apprenticeships within our engineering team. We want to do all we can in this area, and will continue to explore a range of options for expanding this kind of engagement.

4 INFRASTRUCTURE

4.1 Whilst the terminals' structural improvements were applauded, there were a number of comments made about the problems caused by the on-going works and it was felt by some that the overall passenger service had not yet caught up with the structural improvements.

We understand the disruption that has been caused by our construction programme and Chapter 5 now includes a development principle to minimise the disruption and impact on passenger service during construction and maintenance activity.

4.2 Several comments considered the impact of future A380 Airbus aircraft on the airfield and the need for changes to be made to accommodate these very large aircraft in the future.

The text describing the works needed to support A380 operations has been updated (See Chapter 6).

4.3 Most of the responses received focused on the North and South Terminals with mainly very positive comments about the improvements currently being undertaken. However, there was recognition that the current works were causing problems in terms of access and way-finding.

See response to 4.1

4.4 One of the most frequently raised issues was the problem of the vehicle drop-off points at both terminals that were considered inadequate and located too far from the terminal buildings.

We understand this concern and have updated the text in Chapter 7 to explain how we are seeking to improve the drop-off and pick-up operation.

Comments received on Draft Master Plan

Gatwick Airport's response

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| <p>4.5 A number also expressed concerns about signage in the passenger terminals and way-finding (particularly in the South Terminal) to bus, rail, pick-up and car park areas.</p> | <p>Again we understand this concern and a project has been initiated to improve signage within the external areas of the airport. We have updated the text in Chapter 7 to reflect this need for improvement.</p> |
| <p>4.6 A common issue raised was the concern over the long walking distances from the terminal to some of the furthest departure gates at the end of the piers.</p> | <p>When this issue was raised at exhibitions and workshops we explained that the walking distances are largely driven by the layout of the airport which is very difficult to change. However Chapter 2 explains that we are trying to find ways to improve all aspects of the passenger journey through the airport.</p> |
| <p>4.7 Comments were recorded about disabled access around the Airport and the need for improvements to the special assistance provision for airport passengers.</p> | <p>We are continually looking for ways to improve the service for Passengers with Reduced Mobility (PRMs) which is an important (and growing) passenger group at Gatwick. Further information on how we are doing this has been provided in Chapter 2.</p> |
| <p>4.8 Several respondents questioned whether two terminals were sufficient to accommodate the growth to 40mppa, especially with the advent of the A380 Airbus.</p> | <p>Chapter 6 has been updated to explain that our investment plans are based on a thorough assessment of the infrastructure requirements for processing the passenger growth forecasts.</p> |
| <p>4.9 As well as the comments relating to the distance of some of the piers and boarding gates from the main terminal, a suggestion was also made that wheelchair lifts should be incorporated into the air bridges.</p> | <p>Chapter 2 now explains how we take into account the needs of PRMs in redeveloping our terminals, e.g. engagement with our Passenger Advisory Group. Gate lifts are being included in the scope of our new pier projects.</p> |
| <p>4.10 It was suggested that Gatwick should strive to achieve a higher proportion of passengers using public transport to avoid the need for so many extra parking spaces to be provided.</p> | <p>There will always be proportion of our passengers who choose, for a variety of reasons, to use private cars to travel to the airport. If there are not enough parking spaces this can actually increase the number of road trips as passengers are given lifts to the airport. However we are striving to increase public transport use. See also the response to 5.1</p> |

Comments received on Draft Master Plan

Gatwick Airport's response

4.11 There were a number of comments made relating to the improvements that are required at the coach interchange stations at both terminals and about the 'monopoly' enjoyed by the single taxi company operating from the airport.

We are currently reviewing the coach interchange areas and reviewing best practice with our operators. A number of measures will be implemented in 2012 and more will be identified through our Surface Access Strategy. We openly tender out taxi concession to ensure that we deliver a high quality and competitive service to our passengers. We are continuing to work with our concessionaire to improve the quality and performance of this service.

4.12 Several visitors to the public exhibitions reported their disappointment that an aircraft viewing area had not been included in the infrastructure proposals.

Since the Draft masterplan was published, we have given some consideration to the possibility of re-providing an aircraft viewing area at Gatwick. We are receptive to the idea of some form of visitors' facility and will continue to explore options. However we are mindful of the security considerations that must be addressed as well as the financial viability of any scheme.

5 SURFACE ACCESS

5.1 Several respondents applauded the airport for what it had achieved in already reaching the 2020 target of 40% of all passengers travelling by public transport, whilst others considered that the target was not high enough and should be raised to at least 50%.

Whilst we have made significant progress on the public transport mode share target (which is 40% public transport mode share when the airport reaches 40mppa) by the time we reach 40mppa a further 4 million passenger per annum will need to be using public transport. Chapter 7 has been updated to explain how we will review progress towards this target, and consider the case for any future targets, as part of the 2012 Airport Surface Access.

5.2 There was a request that Gatwick strives to bring together all transport organisations as a partnership to achieve a truly '21st century solution'.

Through the Gatwick Area Transport Forum, Gatwick will bring together the key stakeholders to help develop better surface access solutions for the airport. In April 2012 the first Surface Access Vision Workshop was held with all relevant organisations represented. This approach is described in Chapter 7.

5.3 It was also recognised that public transport should be reasonably-priced to encourage usage.

Public transport fares are set by individual operators of the services, however through the Gatwick Transport Forum issues such as these can be raised with Operators.

Comments received on Draft Master Plan

Gatwick Airport's response

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| <p>5.4 Several respondents made the point that the increase in housing in the area planned around the airport would compound the traffic volume and congestion issues.</p> | <p>We will continue to engage with local authorities around how best to make provision for an increased number of passengers at Gatwick. We also note a range of existing proposals for new housing developments within the Gatwick area. We are not aware of any specific studies that have been conducted around the potential impact on local road congestion as a result of these developments however we would be happy to engage further with local authorities should they wish to undertake such studies.</p> |
| <p>5.5 There was general consensus that with the forecast growth to 40mppa the road, rail, bus/coach and cycle access provision would need to be improved and services increased to meet these targets.</p> | <p>Chapter 7 has been modified to explain more about our strategies to improve all aspects of surface access to the airport as part of the new Airport Surface Access Strategy.</p> |
| <p>5.6 The most frequently raised issue in the rail feedback related to the Gatwick Express and there was almost unanimous condemnation of plans to introduce stops in the service to London Victoria. Some commented that the extension of the Gatwick Express service to Brighton in the peak periods severely impacted its capacity to pick up airport passengers and their bags.</p> | <p>Gatwick shares this concern about degradation to the Gatwick Express service and Chapter 7 has been updated to explain our views on this and how we are working to preserve and improve this service.</p> |
| <p>5.7 Whilst there was support for the Gatwick Express, there were a number of comments about the inadequacy and old-age of the Gatwick Express rolling stock, high price and the poor internal design and lack of baggage space.</p> | <p>See response to 5.6 above.</p> |
| <p>5.8 Rail capacity, especially in the peak periods was considered a significant issue for the future and it was felt that capacity at the Airport station would need to increase to meet future demands.</p> | <p>Chapter 7 has been expanded to explain how we are lobbying for increased capacity on the rail network and provides some specific proposals for how this could be achieved.</p> |
| <p>5.9 Communities to the east of the airport frequently raised the need for the reinstatement of a rail link between Gatwick and the towns to the east and there were a number of comments supporting the need for rail links beyond London.</p> | <p>See response to 5.8</p> |

Comments received on Draft Master Plan

Gatwick Airport's response

5.10 The most frequent comment on Surface Access issues raised was the general concern about the impact of the airport's growth on the local roads network as well as the main motorway and on A-roads.

The impact of Gatwick related traffic is most significant on the major roads in the immediate vicinity of the airport. Chapter 7 includes details of road capacity modeling which shows that this impact is expected to be manageable.

5.11 A significant number of comments also raised the issue of poor road signage to the airport.

A project has now been initiated to improve signage within the external areas of the airport.

5.12 A high proportion of respondents stated that a number of the minor roads around the airport were being used as 'rat-runs'.

We will continue to work closely with West Sussex County Council and the Highways Agency. This work involves studying and resolving road accidents and well as road capacity issues. However we also recognize that non airport related traffic is a significant user of the road network around Gatwick.

5.13 The issue of severe congestion on local roads as a result of accidents and delays on the main arterial routes to the Airport was also raised.

See response to 5.12

5.14 Issues that raised a good deal of discussion were the problems of the drop-off and pick-up points at both terminals. A number of participants in the consultation commented on the lack of space and of being moved on too quickly by traffic wardens.

Since the consultation we have completed further improvements to the forecourts which are available for dropping off passengers. We do have traffic wardens and traffic marshals in these areas who are essential to the safe, secure and efficient use of the limited capacity available in these areas, but we appreciate that being moved-on can be a stressful experience. We will be undertaking a signage project to clarify forecourt use in 2012.

5.15 Many respondents commented that local bus services serving the airport and communities around Gatwick needed improvement and that local authorities were being forced to cut some bus services as part of their cost-cutting initiatives. There were suggestions that Gatwick could help with financial contributions to local bus services as this could reduce car travel by airport and airline staff.

Gatwick Airport, through the Transport Forum Steering Group, has provided start up funding for local and regional bus and coach routes which meet strict criteria. Future potential services are currently being reviewed as part of the 2012 Airport Surface Access Strategy.

Comments received on Draft Master Plan

Gatwick Airport's response

5.16 Comments were also made that the coach station facilities should be improved to encourage more operators and thereby offer a greater and wider choice of routes for airport passengers.

See response to 4.11.

5.17 It was noted by communities to the east and west of the airport that there were limited bus services to and from the airport, resulting in staff and passengers living in those areas having to resort to private car use.

See response to 5.15.

5.18 Cycling and walking were not issues that were raised frequently at the public consultation events. However there were a number of respondents who suggested that there is a demand for more cycle parking at both terminals and for cycle and pedestrian routes around the airport.

In 2012, new cycle parking facilities will be installed at the airport. Following this work we will review what further opportunities exist for cycling and walking when we review our Airport Staff Travel Plan in 2013.

5.19 It was widely recognised that more airport parking would be required to accommodate growth. However it was felt that everything possible should be done to encourage passengers to use public transport as their first choice.

Gatwick agrees and both strategies are described in Chapter 7.

5.20 The issue of off-airport parking was raised by a number of respondents and the majority of comments encouraged Gatwick to stop these facilities. Some participants in the stakeholder workshops suggested that Controlled Parking Zones should be introduced to prevent airport parking in residential streets.

The Local Planning Authorities control and enforce all off-airport parking including on and off-street. We will continue to work with them to support them in this approach.

5.21 A number of local business representatives, whose staff regularly use Gatwick rail station, suggested that special car parking facilities should be made available for regular users as there is a high cost of the short term car park.

As an airport operator we recognise that our main priority is provision of services to air passengers, however we also recognise that the airport is also a transport hub for commuters. A commuter car park is available for commuters to use and can be booked through the airport web site.

Comments received on Draft Master Plan

Gatwick Airport's response

5.22 A number of respondents commented on the 'monopoly' enjoyed by the single taxi company operating from the airport and the high costs compared with other local taxi services. There were also comments about the long taxi queues at peak periods and the difficulty of other taxi services to pick-up passengers from the main taxi stand areas.

See response to 4.11.

6 ECONOMIC FACTORS

6.1 There were some respondents who stated that the [economic] contribution [of the airport] has been exaggerated in the draft master plan.

We have updated both our employment and economic benefit estimates and provided more information on how these have been calculated. These can be found in Chapter 8.

6.2 There was also comment that airports take people away from the UK to spend their money elsewhere and that this may actually have a detrimental effect on the economy.

Chapter 8 explains that even passengers flying from Gatwick to holiday abroad are contributing to the UK economy through, for example, the taxes they pay and the purchase of travel related services from UK based organisations.

6.3 Some respondents questioned Gatwick's figures with regard to its contribution to the economy of London and the South East and were of the view that this had been exaggerated. However, some business representatives maintained that Gatwick's contribution to the local economy may actually be higher due to the number of 'indirect' jobs.

See response to 6.1 above.

6.4 There were several other factors raised that respondents felt should be taken into consideration in the analysis of the economic benefits generated by the growth of Gatwick; these include factors such as an increase in pollution and noise disturbance.

While we have not attempted to put an economic cost on any adverse environmental impacts, we do not believe that such an approach would change our view that Gatwick makes a substantial net economic benefit to the region.

6.5 It was felt by a number of participants that Gatwick's proximity to AONBs, visitor attractions and attractive countryside may have a negative effect in the area on tourism. This was a view shared by a number of participants from communities to the east of the Airport.

Our strategies for addressing environmental impacts are described in Chapter 9 which has been enhanced to provide more information on how we are seeking to manage and minimise these impacts.

Comments received on Draft Master Plan

Gatwick Airport's response

6.6	<p>While most respondents supported growth in the number of people Gatwick employs, the point was made that there is already a local housing shortage in the area and that more new homes would need to be built. For some, this was seen as a negative effect of the Airport's expansion.</p>	<p>Comment noted.</p>
6.7	<p>An increase in the number of destinations offered by Gatwick for business travel was seen as being an important way of improving Gatwick's future economic contribution and the local economy's competitiveness. Connectivity was frequently raised as an issue by business respondents and that London is at risk of losing out to certain other European cities, such as Amsterdam and Frankfurt.</p>	<p>See response to 1.5 above.</p>
6.8	<p>One view raised was that the presence of Gatwick has led to the local economy becoming over-reliant on the Airport and that this over-reliance has made the local economy vulnerable and discouraged diversification. This point was, however, countered by some who consider that Gatwick actually creates diversity in the local economy.</p>	<p>Comment noted.</p>
6.9	<p>While the majority of people who discussed the issue of Gatwick's future economic contribution saw Gatwick as being important to the future growth of the local, regional and national economy, some viewed other factors—particularly noise and CO2 emissions—associated with the growth of the Airport as being more important.</p>	<p>Comment noted.</p>
6.10	<p>Gatwick's importance to the local area as a large employer was frequently stressed by respondents. The area's reliance on Gatwick was raised as an issue and the point made that if the Government's position on aviation changed in the future, or if aviation became unviable or untenable, many of the people currently reliant on Gatwick for work may be forced to leave the area. It was also stated that Gatwick had encouraged a high proportion of what were seen as unskilled jobs into the area.</p>	<p>Comments noted. Chapter 8 now explains that there are a wide range of jobs at the airport and that average remuneration for airport jobs is in-line with the wider London and South East job market.</p>

Comments received on Draft Master Plan

Gatwick Airport's response

6.11 One opinion put forward by a several participants was that if Gatwick did not continue to grow at the rate predicted, the employment figures quoted in the draft master plan may be inaccurate and indeed may have been exaggerated. It was suggested that for clarity, more detail is needed in the final master plan on how employment statistics had been determined.

Our employment forecasts have been updated and more information provided on how these have been calculated in Chapter 8.

6.12 It was the view of many stakeholders that Gatwick benefits the local economy because of the number of tourists it brings to London and the local area. At the same time, the point was made that the airport actually creates outbound tourism, which could be considered as a UK economic dis-benefit.

See response to 6.2 above.

6.13 There was a good deal of support from local businesses for Gatwick's Meet the Buyer events as a way for businesses to benefit from working with the Airport. However, some businesses and business groups said that they would like these events to be more frequent and more accessible.

Comment noted.
The Meet the Buyer events are supported by, but not organised by, Gatwick Airport Limited. They are managed by the organisation 'Business to Business' but we will draw this comment to their attention.

6.14 Many respondents were supportive of Gatwick's aspiration to procure services locally although it was felt by some that the target figure of 15% should be raised. The work of CADIA was praised by a number of respondents.

Chapter 8 has been updated to explain that we do not have a target percentage for local suppliers but we encourage our main construction partners to use these wherever possible.

7

CARBON EMISSIONS

7.1 One widely-shared concern raised by respondents was that the Airport was forecasting carbon emission increases of up to 20% by 2020. It was felt by a number of respondents that this contradicted the almost universal acceptance by business and industry to achieve reductions in CO2 emissions over the next decade. It was felt that more effort should be made by the airport to reduce the levels.

Chapter 9 has been updated to provide more context on our carbon forecasts which show increases associated with the growth in aircraft movements but decreases for emissions entirely within the airport's control.

In our view there is no contradiction between providing certain sectors, such as aviation, with room to grow, within the context of an overall carbon reduction. We believe this is a view shared by Government.

Comments received on Draft Master Plan

Gatwick Airport's response

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| <p>7.2</p> | <p>Suggestions were put forward suggesting that Gatwick should incentivise the airlines to reduce CO₂ emissions and respondents suggested penalising the more polluting airlines; however there was uncertainty about how this could be achieved.</p> | <p>We don't have any direct incentives for airlines to reduce carbon emissions at the moment. Chapter 9 explains that this is being addressed by the recent inclusion of aviation within the EU ETS. It is our view that this, along with other measures such as improvements to the efficiency of our ground handling processes (also now described in Chapter 9) and the pure economics of oil price increases will provide the incentives to airlines to reduce fuel burn wherever possible.</p> |
| <p>7.3</p> | <p>Gatwick should also encourage its business suppliers to reduce their own carbon emissions as a way of helping to reduce the Airport's overall carbon footprint.</p> | <p>GAL does this through its procurement policy which takes account of the sustainability of potential suppliers' operations through the tendering process.</p> |
| <p>7.4</p> | <p>Other initiatives proposed included reduced parking charges for hybrid fuel vehicles; converting Gatwick's own fleet of vehicles to electric power; and incentivising local bus operators to use hybrid or hydrogen fuelled buses.</p> | <p>We provide a short duration of free parking for electric vehicles in our short-stay car parks. We are also working with our business partners to deliver a 'clean fleet programme' to improve the sustainability of operational vehicles.</p> |
| <p>7.5</p> | <p>There was universal support for the proposed energy centre and the future reduction in the reliance on energy from the National Grid.</p> | <p>Comment noted</p> |
| <p>7.6</p> | <p>It was considered that Gatwick should be more proactive in promoting its CO₂ reduction achievements and initiatives and become a Green Champion. Another respondent proposed that Gatwick become a Centre of Excellence in environmental technologies/initiatives.</p> | <p>This is an interesting idea and one that we will consider for the future</p> |
| <p>7.7</p> | <p>Several groups noted that some of the facts included in this chapter of the draft master plan were not in accord with DfT and other Government statistics.</p> | <p>In this final master plan we have attempted to clarify the relationship between our statistics and any equivalent, relevant data from Government sources.</p> |
| <p>8</p> | <p>NOISE</p> | |
| <p>8.1</p> | <p>The point was made that there was some confusion about the noise contours used in draft master plan document.</p> | <p>Chapter 9 has been updated to clarify the basis of the noise contours presented.</p> |

Comments received on Draft Master Plan

Gatwick Airport's response

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| <p>8.2 It was felt that Gatwick should incentivise airlines to [upgrade their fleets to quieter aircraft] and penalise those airlines which do not. It was also suggested that Gatwick should 'name-and-shame' airlines and publish a 'league table' of airlines.</p> | <p>We already provide incentives for quieter aircraft through our differential pricing structure. We are also developing a 'fly quieter and cleaner' programme focusing on promoting the best performing operators. We hope to have this in place by the end of the year.</p> |
| <p>8.3 It was felt by a number of respondents that Gatwick's communications had improved under the new ownership. However, a significant proportion of people who had engaged with the FEU (Flight Evaluation Unit), were critical of how their complaints had been dealt with.</p> | <p>Chapter 9 has been updated to explain that Gatwick has made changes to the way that the FEU is managed, reorganising it as the Flight Performance Team, so that a better service is provided to people contacting us with questions about air noise.</p> |
| <p>8.4 The Noise Insulation Scheme was viewed positively by those people who had taken advantage of it. There were a number of calls for the scheme to be reviewed and extended. The suggestion was made that Gatwick should aim to widen the scope and reinvigorate the scheme.</p> | <p>Chapter 9 has been updated to refer to our plans to update the noise insulation scheme with the planned roll-out of a new scheme during 2013.</p> |
| <p>8.5 Whilst it was accepted that responsibility for Noise Preferential Routes rests with the Department for Transport (DfT), many who raised the issue of noise in the consultation were of the view that Gatwick should seek to apply pressure on the DfT to alter flight paths.</p> | <p>We will review this as part of our response to the Government's consultation on the emerging policy framework this year. However we are already in discussion with NATS, DfT and CAA on the issues of NPRs and how these might be improved in the future.</p> |
| <p>8.6 The issue of respite (from overflying) was raised by a number of respondents and there was broad support for the concept of respite from the majority of people who discussed this issue. It was felt by many that respite would not only give local residents a break from the noise impacts of the Airport, but it would also allow tourist attractions to be able to plan events.</p> | <p>Chapter 9 has been updated to refer to this issue and the work we are doing to explore the feasibility of a respite scheme.</p> |
| <p>8.7 GATCOM commented that the master plan should strive to provide greater linkages with the END Noise Action Plan / 2008 legal agreement and the mitigation measures planned to minimise the impact of Gatwick's growth.</p> | <p>Chapter 9 has been updated to provide more information on our Noise Action Plan and commitments under the 2008 legal agreement.</p> |

Comments received on Draft Master Plan

Gatwick Airport's response

8.8 Several respondents criticised the issue of an average being used to convey the changes in noise. It was felt that using the Government's recommended measure of an average noise reading taken over a 16-hour day was inappropriate and misleading. The point was also made that the real issue of noise related to frequency rather than decibel levels.

Chapter 9 has been updated to acknowledge the concern about frequency of aircraft operations and explain how we are seeking to mitigate this.

8.9 It was felt that Gatwick should lobby NATS and the DfT to alter flight paths so that aircraft are not allowed to fly over quiet villages, countryside and AONB's. Conversely, there were a number of responses which made the point that flying over open countryside is better than flying over residential areas, schools and hospitals.

In its consultation on the new sustainable aviation framework, the Government sought views on the issue of concentration versus dispersal of air noise impacts. We will work with the Government on this when we see the outcome of its policy review.

8.10 The subject of Precision Area Navigation (P-RNAV) was raised several times. Whilst there was a certain amount of anecdotal evidence of disturbance caused by aircraft flying outside of their routes, there were differing views on whether or not aircraft flying more accurately along their routes was desirable. For some, the narrowing of noise contours was seen as positive as it meant they would not be disturbed at all by flights, however, for others this would mean greater and more frequent disturbance. In areas where noise was clearly the biggest issue, there was no consensus on this issue.

For the issue of aircraft flying outside the prescribed NPRs, we record these incidents of poor track-keeping and work with the operators, through NATMAG to avoid their re-occurrence.

If P-RNAV is rolled-out we will work with CAA and NATS to ensure that the agreed route of least impact is flown, as far as it is possible.

8.11 It was commented that the number of people within the 57dB noise contour (defining the onset of community annoyance) would rise from 3,100 to 4,952, which represents an increase of 60%. For some respondents, this was seen as unacceptable.

Chapter 9 has been updated to include the latest noise contours for Gatwick produced by CAA and to provide more information on the historic and predicted trends in contour size.

8.12 The issue of night flights was a concern for a number of respondents, particularly those to the east of the Airport. Assurances were sought that Gatwick would not seek to change the current night flight restrictions in the future.

Chapter 4 confirms that our growth plans do not require any increase in the current night flying quota. Chapter 9 now explains the current position on the Government's planned review of the night flight regime.

Comments received on Draft Master Plan

Gatwick Airport's response

8.13 In terms of strategies to manage the noise impacts of the Airport, a number of respondents felt that Gatwick could do more to encourage better flying practices from airlines including working in partnership with NATS, the CAA and DfT and increasing the angle of approach as a way of reducing levels of disturbance on communities close to the Airport.

We believe our new 'flying quieter and cleaner' campaign will go a long way to address this point. Chapter 9 has been updated to make reference to the studies of steeper approach paths – work that is being led by Sustainable Aviation.

8.14 The idea of introducing smart technology to give real-time noise alerts to residents was raised in order to allow complainants to give more factual, evidence-based accounts when reporting noise infringements to the FEU. It was also requested that Gatwick increases the number of monitoring stations.

There are some new initiatives that will address this point. We are updating the internet based 'web-track' system to provide real-time information on recorded noise levels from fixed monitoring equipment, so this can be viewed along with the associated aircraft track. We are also looking for a technology solution to download data from the mobile monitors so this can also be made available in real-time.

8.15 Ground noise was more frequently cited as an issue by communities living close to the north and south of the airport. A suggestion was made that Gatwick could further manage ground noise by increasing the number of monitoring stations. The village of Charlwood was raised by a number of respondents as a location where the increase in ground noise was causing a good deal of concern. The idea of increasing the number of homes that would benefit from the Noise Insulation Scheme was suggested by several respondents.

We note and understand this comment. We are considering the possibility of additional monitoring equipment but our focus is more on how to best use the available data to manage and reduce future noise impacts. Chapter 9 explains the plans to update the noise insulation scheme.

8.16 There were some calls for a change in the way ground noise was reported in the draft master plan document, including more detail on peak noise events.

We publish peak noise events in our annual report 'mobile noise monitor annual report' available on our website.

9

OTHER ENVIRONMENTAL IMPACTS

9.1 It was commented that Gatwick could do more to publicise its environmental aims and achievements, do more to minimise the environmental effects of its proposals and that future development should be more sustainable. At the same time, Gatwick was praised for its efforts in working to minimise the environmental impacts of its proposed expansion.

Chapter 9 has been expanded to provide more information on how we are reducing our environmental impacts and how we are performing against our targets.

Comments received on Draft Master Plan

Gatwick Airport's response

9.2 The view was expressed that the language used in the environment section of the draft master plan is too technical and ought to be simplified in the final document. Equally, it should also be noted that some respondents advised that there was insufficient technical information.

Whilst it is impossible to please all readers in this regard, based on all the comments received, we think the draft master plan probably strikes the best possible balance between technical content and readability. We have therefore maintained this in the final document.

9.3 The point was made by a number of respondents that, although it is accepted that Gatwick's expansion will not contribute to any direct, measurable or significant effects on local, national or global temperatures, Gatwick should strive to do more to reduce its emissions.

Chapter 9 has been updated to explain more about how we are seeking to reduce green house gas emissions.

9.4 Although it was thought that the main cause of air pollution was emissions from aircraft, the point was made that an increase in road traffic as a result of Gatwick's expansion would worsen air quality for those people living in close proximity to the airport. It was added that by doing more to encourage the use of more sustainable methods of transport and by increasing the public transport targets, the effects of this could be reduced.

The air quality modeling described in Chapter 9 takes account of the predicted increase in vehicle traffic (both airport and non-airport related) on the local roads. Despite this increase in vehicle trips, predicted improvements in vehicle emission controls/technology means that the air quality around Gatwick is expected to improve. This does not mean to say that we will not continue to monitor the air quality environment and work to identify ways of reducing harmful emissions further.

9.5 It was recognised that Gatwick does a lot with regard to air quality management although it was stated that there is a good deal of 'overlap' between air quality and noise committees and that these committees could be 'streamlined'.

We do not consider there to be an overlap although there are clearly interdependences between the different groups.

9.6 It was noted that the recycling targets, detailed in the draft master plan, are actually no higher than those set for private households in nearby local authorities. It was felt that this target of 70% ought to be increased significantly and some respondents felt that Gatwick should aim for 90% - 95% recycling and even aim to become a zero waste airport.

Chapter 9 has been updated to address this point and explains the difficulties we have imposing financial penalties on business partners who may fail to meet our waste targets.

Comments received on Draft Master Plan

Gatwick Airport's response

9.7 There was broad acceptance that Gatwick should strive to reduce its energy consumption and there was a good deal of support for the inclusion of an energy centre CHP plant as part of the proposals and as a way of reducing Gatwick's carbon footprint. The point was made that Gatwick may be in a position to supply energy to the local community if there is a surplus and the Airport should look to investigate this in the future by working with local authorities.

9.8 The use of photovoltaic cells was suggested by a number of respondents, although the point was made that this might be hazardous for aircraft.

9.9 There was a request for Gatwick to do more to contribute to community nature groups.

9.10 The importance of maintaining the landscaped corridor around the North West perimeter of the airport was stressed by a number of respondents as was the need to properly screen any further airport development in this area including the proposed hangars.

10 BEYOND 2020

10.1 There was some uncertainty amongst respondents about Government policy on future airport growth. It was suggested that Gatwick should consider including a statement on its response to the Government's draft Sustainable Framework for Aviation to be published in March 2012.

10.2 Many respondents raised the issue of blight and that the uncertainty about the future severely impacted those properties on or around the safeguarded land.

We note the support for the energy centre or centres. These will be sized to meet the demand of the airport and at this stage we do not anticipate any surplus energy being available.

Chapter 9 has been updated to report the installation of solar panels at Gatwick in December 2012 to generate electricity for the airfield systems.

This request is noted and will be considered.

The master plan acknowledges the importance placed by the local communities on maintaining the landscaped corridor around the North West perimeter. It also acknowledges their concerns about the potential visual intrusion of any further development in this area. Gatwick will take this into account when considering any development options.

The master plan explains that we will be fully participating in the Government's planned consultation on the draft framework.

Gatwick understands this concern. The second runway safeguarding emerged from the 2003 Air Transport White Paper which also required the setting up of blight compensation schemes. Chapter 10 explains that these schemes are still open to new applications meeting the agreed criteria.

Comments received on Draft Master Plan

Gatwick Airport's response

11 OTHER COMMENTS

- 11.1 Several respondents wanted further information on how Gatwick prepared for emergencies and wanted assurances that Gatwick was prepared for a repeat of the adverse weather problems in the winter of 2011/12.
- 11.2 Improved communications was one theme that evolved from the public consultation and respondents valued being kept informed about the airport's plans for the future.
- 11.3 There was some support, particularly from attendees at public consultation events for a viewing platform at Gatwick. A number of people who attended the public exhibitions talked fondly of the viewing platform that had previously been at the Airport.

Chapter 2 has been updated to include some comments on emergency planning and operational resilience.

Comment noted.

Gatwick notes this request with interest and some kind of visitor's facility is an opportunity that we will keep under review. However until a firm proposal has development, we have decided not to include such a facility in the master plan. See also the response to 4.12.

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This publication of this report supports our decade of change. We've used a recycled paper containing 50% recycled waste and 50% virgin fibre and manufactured in a mill certified with ISO 14001 environmental management standard. We've also used a local design agency and a local printing firm to produce this report.